

# **Subsurface Investigation Report of Findings**

For the May 9, 10, and 11, 2006 Subsurface Investigation



Dated:

July 7, 2006

Site:

Northcrest 76 1500 Northcrest Drive Crescent City, California 95531

**LOP # 1TDN006** 

Prepared for:

Big Oil & Tire Co.

# **TABLE OF CONTENTS**

1.0	EXECUTIVE SUMMARY	4
2.0	INTRODUCTION	6
2.1 2.2 2.3 2.4 2.5	SITE LOCATION	6 7 7
3.0	PREVIOUS INVESTIGATIONS	8
3.1 3.2 3.3 3.4	1989 TANK REMOVAL (NICHOLS BROTHERS PRECISION TANK TESTING) 2001 DISPENSER SAMPLING (SOUNPACIFIC)	9 10
4.0	RECENT INVESTIGATION	12
4.1 4.2 4.3 4.4 4.5 4.6	SOIL COLLECTION PROCEDURES  SOIL SAMPLING METHODS  MONITORING WELL CONSTRUCTION  MONITORING WELL DEVELOPMENT AND GROUNDWATER SAMPLING  GROUNDWATER MONITORING PROGRAM  GROUNDWATER FROM MONITORING WELLS ANALYTICAL METHODS	12 12 14
5.0	RESULTS	15
5.1 5.2 5.3 5.4	SOIL ANALYTICAL RESULTS	15
6.0	SITE SANITATION PROCEDURES	19
7.0	SUMMARY OF INVESTIGATION	20
8.0	SITE CONCEPTUAL MODEL	20
9.0	SUMMARY AND RECOMMENDATIONS	23
10.0	CERTIFICATION	25

TABLE 1: WATER LEVELS	
TABLE 2: SOIL ANALYTICAL RESULTS	
TABLE 3: GRAB GROUNDWATER ANALYTICAL RESULTS	
TABLE 4: DOMESTIC WELL GROUNDWATER ANALYTICAL RESULTS	
TABLE 5: GROUNDWATER ANALYTICAL RESULTS FROM MONITORING WELLS	
<u>FIGURES</u>	
FIGURE 1: AERIAL/TOPO MAP	
FIGURE 2: SITE PLAN	
FIGURE 3: GROUNDWATER FLOW DIRECTION & GRADIENT	
FIGURE 4: SAMPLE LOCATION MAP	
FIGURE 5: GROUNDWATER ANALYTICAL RESULTS	
APPENDICES	
APPENDIX A: WELL COMPLETION DIAGRAMS AND BORING LOGS	
APPENDIX B:LABORATORY ANALYTICAL REPORT: SOIL	,
APPENDIX C: LABORATORY ANALYTICAL REPORT: GROUNDWATER	

APPENDIX D: STANDARD OPERATING PROCEDURES

APPENDIX E: FIELD NOTES: WELL DEVELOPEMANT AND WELL INSTALLATION

# 1.0 EXECUTIVE SUMMARY

In May 2006, SounPacific Environmental Services (SounPacific) conducted a subsurface investigation at the underground storage tank (UST) site located at 1500 Northcrest Drive, in Crescent City, California (Site). The work was conducted at the request of Big Oil & Tire Co. (BO&T), the responsible party (RP) for the cleanup of the Site. Based on activities, observations, and laboratory analytical results, a summary of the activities and results are presented below:

- On May 9, 10, and 11, 2006, SounPacific staff oversaw the installation of eight (8) groundwater monitoring wells at the Northcrest 76 facility. The monitoring wells (MW-1 through MW-8) were drilled for the collection of soil and groundwater samples, with the objective to further delineate the extent of the previously identified soil and groundwater beneath the Site.
- Site geology predominantly consisted of silty sand to eight (8) to ten (10) feet below ground surface (bgs) underlain by sand to approximately 30 feet bgs. Groundwater was encountered at approximately 11 feet bgs, although it appeared to be at 14 feet bgs and 17 feet bgs in two (2) of the eight (8) monitoring wells at the time of well installation. Static water levels measured in the wells after development and purging indicated that water levels in all wells are at approximately 12 to 13 feet bgs. Groundwater flow direction was calculated to be southeasterly at a shallow gradient (Table 1).
- A total of 36 soil samples from the eight (8) boreholes were submitted for laboratory analyses. No petroleum hydrocarbons were detected in any of the soil samples at concentrations of concern (Table 2).
- Groundwater samples were collected from each of the wells. No petroleum hydrocarbons at concentrations of concern were reported in the groundwater samples from monitoring wells MW-2, MW-6, MW-7, and MW-8. The sample from MW-3 reported the highest concentration of total petroleum hydrocarbons as gasoline (TPHg) at 22,200 ppb and total

BTXE at 4,395 ppb. Methyl tertiary butyl ether (MTBE) was also reported in five (5) wells ranging from 1.4 ppb (MW-6) to 64.6 ppb (MW-5). MW-4 reported TPH as diesel (TPHd) at 3,530 ppb.

• This investigation identified minimal soil contamination, but confirmed that the groundwater beneath the site is impacted with petroleum hydrocarbons that are migrating in a southeasterly direction beneath the Site and offsite toward the intersection of Northcrest Drive and Washington Boulevard.

# 2.0 INTRODUCTION

This report was prepared by SounPacific on behalf of BO&T to report the activities and findings of the subsurface investigation that was conducted at the Northcrest 76 facility on May 9, 10, and 11, 2006. The purpose of this *Report of Findings* is to discuss the sampling activity, interpret the soil and groundwater analytical results, and provide recommendations for future activity.

This investigation was initiated when a letter dated August 17, 2005, from the North Coast Regional Water Quality Control Board (NCRWQCB), concurred that further investigation was required at the facility to further delineate the extent of the release at the Site. In September 2006, SounPacific conducted a subsurface investigation at the Site in accordance with the *Subsurface Investigation Workplan* dated October 11, 2005 prepared by SounPacific, and approved by the NCRWQCB by letter dated December 21, 2005. An addendum, dated January 26, 2006 was prepared in response to the December 21, 2005 letter. The addendum was subsequently approved by the NCRWQCB.

#### 2.1 Site Location

The Site is located in Crescent City, California, with a physical street address of 1500 Northcrest Drive, Crescent City, California. The Site is situated approximately 1.5 miles north of downtown Crescent City, on the northwest corner of the intersection of Northcrest Drive and Washington Boulevard (Figure 1).

# 2.2 Site Description

Northcrest 76 is a retail petroleum filling facility. Site improvements include a single story building and two (2) dispenser islands that are covered by a canopy. The dispensers supply regular grade gasoline, premium grade gasoline, and diesel fuel for retail sale. The main structure is used as a Mini-Mart and office for business and cashier purposes. The entrance of the main structure faces east towards Northcrest Drive. A small storage building is located next to the main building near the north side of the Site. The Site is surfaced around the current structure with concrete and asphalt. The back wall of the building is on the property line (zero

lot line). A paved and unpaved area is located behind the building on the neighboring property, which borders the Site both to the north and to the west. Sewer and water services are supplied by public utilities. Electrical and telephone lines servicing the Site are located below ground (Figure 2); however, they are above ground on standard utility poles along the east and south sides of the Site.

### 2.3 Vicinity Description

The surrounding land use in the immediate vicinity is commercial and residential. Humboldt Moving & Storage lies adjacent to, and north and west of, the property. Washington Boulevard is adjacent to the southern property line, while Northcrest Drive borders the east side of the Site. The Rice Repair Storage Shed is separate from the Site to the west by Humboldt Moving and Storage property (Figure 2).

# 2.4 Hydrogeologic Setting

The Site is located approximately two (2) miles east of the Pacific Ocean and approximately 800 feet west of "No Name Creek." The Site is generally flat, with the elevation ranging between 53 feet and 54 feet above mean sea level (amsl). The surrounding topography is relatively flat (Figure 1).

According to the 1987 Weed Sheet, the Site is underlain by the basement rocks of the Cretaceous-Jurassic age Franciscan Complex. Overlying the Franciscan Complex are the Pliocene-Pleistocene marine and non-marine deposits of the St. George Formation. Overlying the St. George Formation is the Quaternary Battery Formation consisting of both marine and continental deposits.

Stable groundwater levels at the Site were at an approximate depth of 12 to 13 feet bgs in May 2006. It has been measured as deep as 20 feet bgs during the dryer times of the year. Groundwater flow direction appears to be southeasterly (Figure 3).

# 2.5 Current Site Usage & UST History

SounPacific understands that the property is owned by BO&T of Arcata, California. The main structure on the Site is currently being used as a retail gasoline station and Mini-Mart. At present, there is one (1) 8,000-gallon regular unleaded gasoline UST, one (1) 8,000-gallon premium unleaded gasoline UST, and one (1) 6,000-gallon diesel fuel UST, all located in the southeastern portion of the property (Figure 2). According to Del Norte County Health Department (DNCHD) files, three (3) *Underground Storage Tank Program Tank Permit Application Information forms* were completed on March 7, 1990, for the installation of the three (3) double walled UST's currently in use at the Site. This system includes a pressurized turbine fuel delivery system, double walled piping of product lines, and a fiberglass coating on the outer UST walls.

Information from DNCHD files indicates that BO&T purchased the Site from Liz Puro in 1989. At that time, the Site had eight (8) USTs consisting of: one (1) 100-gallon UST of unknown contents, one (1) 100-gallon white gas UST, one (1) 150-gallon diesel UST, one (1) 150-gallon kerosene UST, one (1) 500-gallon waste oil UST, one (1) 2,000-gallon premium unleaded gasoline UST, and two (2) 4,000-gallon regular unleaded gasoline USTs. The UST systems were composed of single-walled steel tanks, and fuel was delivered to the dispensers through safe-suction technology.

In January 1989, G.R. Construction of Crescent City, California, removed the eight (8) USTs. The 100-gallon and 150-gallon USTs were reportedly crushed onsite, while the remaining USTs were trucked to Hanson Wire and Rope, at 2404 Sandy Prairie Road in Fortuna, California for disposal.

# 3.0 PREVIOUS INVESTIGATIONS

A file review conducted at the DNCHD yielded the following historical information. It should be noted that many details in the County files, concerning the historical sampling information at the Site, appear to be incomplete.

# 3.1 1989 TANK REMOVAL (Nichols Brothers Precision Tank Testing)

On January 10, 1989, the original USTs at the facility were removed, after which compliance sampling and analysis was conducted of the four (4) excavations from which the USTs were removed. This testing included the collection of seven (7) soil samples (1-A through 7-A) from the UST excavations (Figure 4) and one (1) water sample (8-A) collected from a former domestic onsite well. The samples were submitted to North Coast Laboratories for analysis. Samples 1-A, 2-A, 4-A, 6-A, and 7-A, were analyzed for TPHg and benzene, toluene, total xylenes, and ethylbenzene (BTXE). Samples 3-A and 5-A were analyzed for TPHd and BTXE, and Sample 8-A was analyzed for TPHg only. Laboratory analytical results indicated that TPHg was detected in sample 2-A (site of former premium gasoline UST) at a concentration of 15 parts per million (ppm) and in sample 4-A (site of three (3) small USTs that contained kerosene, diesel, and white gas, plus an unknown UST) at a concentration of 6 ppm (Table 2). All the remaining soil samples were below laboratory detection limits for petroleum hydrocarbon constituents. Analysis of the groundwater sample from the former domestic onsite well did nor report any contaminants (Table 3).

# 3.2 2001 DISPENSER SAMPLING (SounPacific)

On August 16, 2001, during a routine inspection of piping behind the dispenser covers, a fuel odor was noted. The station manager reported the concern to the main office and a service representative visited the facility to inspect the system and collect a soil sample from beneath the dispenser. The inspection did not identify any leaks or liquid; and all fittings were inspected and tightened. The collected soil sample was analyzed for TPHg, BTXE, and MTBE. The analysis of the soil sample reported TPHg at 3,100 ppm, along with the BTXE compounds. The results are summarized in Table 2. Due to the presence of impacted soil, an Underground Storage Tank Unauthorized Release / Contaminationsite Report (URF) was submitted to the DNCHD and the NCRWQCB on August 25, 2001, by Greg Sounhein of SounPacific.

Based upon the August 16, 2001 results, SounPacific staff collected four (4) additional soil samples at the Site on October 2, 2001. One (1) soil sample was collected from below each of the dispensers (D1, D2, and D3) and one (1) soil sample was collected along the product lines (PR-1) (Figure 4). The samples were analyzed for TPHg, BTXE, and five (5) fuel oxygenates

(including MTBE) (Table 2). Laboratory analysis reported the presence of petroleum hydrocarbons in all four (4) soil samples, with the highest concentration (9,060 ppm) being reported in the sample at location D-1. The soil analytical results are summarized in Table 2.

# 3.3 2003 SUBSURFACE INVESTIGATION (SounPacific)

During January 17, 22, and 28, 2003, SounPacific performed a subsurface investigation at the Site. Six (6) hand-auguring soil borings (B-1, B-2, B-3, B-4, B-5, and B-6) were drilled to depths of 12 feet bgs for the collection of soil samples. Groundwater was not encountered in any of the borings. The locations of the borings are shown in Figure 4. A total of 18 soil samples were collected and analyzed for TPHg, BTXE, MTBE, TPHd, and TPH as motor oil (TPHmo). In addition, a soil sample from boring B-1 (SB-1@4'), which was located in the vicinity of the former waste oil UST, was also analyzed for fuel oxygenates, halogenated hydrocarbons, lead scavengers, and metals. The laboratory analysis did not report any TPHg or BTXE in any samples. MTBE was reported in five (5) of the samples at low concentrations and TPHd was reported in two (2) samples. The additional analyses on sample SB-1@4', did not report any halogenated hydrocarbons or lead scavengers; however, methanol at 15 ppm was reported in the same sample. Additionally, metals were reported at apparent background levels. All the analytical results are summarized in Table 2.

In addition to the soil samples, a groundwater sample was collected from the domestic well at the Rice Repair Storage Shed (Figure 4) and analyzed for TPHg, BTXE, seven (7) fuel oxygenates, lead scavengers, TPHd, TPHmo, and halogenated hydrocarbons. Analytical results for the groundwater sample were below laboratory detection limits for all analyses, see Table 4.

### 3.4 2004 SUBSURFACE INVESTIGATION (SounPacific)

Due to the presence of previously identified subsurface petroleum hydrocarbons, on September 29 and 30, 2004, SounPacific conducted further subsurface investigation at the Site, with the objective of delineating the vertical and horizontal extent of the impacted soil and groundwater associated with the UST system. The investigation consisted of drilling nine (9) soil borings (B-7, B-8, B-9, B-10, B-11, B-12, B-13, B-14, and B-15) for the collection of soil and grab

On September 29 and 30, 2004, 59 soil samples from nine (9) boreholes (B-7, B-8, B-9, B-10, B-11, B-12, B-13, B-14, and B-15) were collected for analysis, see Figure 4. Laboratory analysis detected TPHg in only four (4) of the soil samples. Two (2) of the four (4) samples were from borings SB-11 and SB-12, and reported TPHg only slightly above the reporting limit; however, in the other two samples, TPHg concentrations of 890 ppm (SB-10@17') and 4,000 ppm (SB-9@18') were reported. Benzene was not reported in any of the samples. Toluene was detected in two (2) samples, SB-11@20' at a concentration of 0.021 ppm and in sample SB-10@20' at a concentration of 7.9 ppm. Total xylenes were reported in nine (9) samples and ranged in concentration from 0.005 ppm (SB-10@9') to 226 ppm (SB-9@18'). Ethylbenzene was reported in six (6) samples and ranged in concentration from 0.012 ppm (SB-10@16') to 80 ppm (SB-9@18'). MTBE was detected in 20 samples and ranged in concentration from 0.007 ppm (SB-12@4', SB-14@8', and SB-15@8') to 4.1 ppm (SB-12@8'). TAME was detected in 12 samples and ranged in concentration from 0.006 ppm (SB-11@12' and SB-13@16') to 0.17 ppm (SB-12@8'). TBA was detected in eight (8) samples and ranged in concentration from 0.086 ppm (SB-12@20') to 2.2 ppm (SB-12@8'). TPHd was detected in nine (9) samples and ranged in concentration from 1.0 ppm (SB-10@16' and SB-14@20') to 110 ppm (SB-10@17'). TPHmo was detected in three (3) samples and ranged in concentration from 21 ppm (SB-13@4') to 39 ppm (SB-14@4'). The complete laboratory results are summarized in Table 2.

On September 30, 2004, SounPacific collected grab groundwater samples from the nine boreholes. TPHg was detected in three (3) samples, ranging in concentration from 100 ppb (SBGW-12) to 3,600 ppb (SBGW-10). Benzene was detected in three (3) samples and ranged in concentration from 1.3 ppb (SBGW-12) to 57 ppb (SBGW-10). Toluene was detected in three (3) samples and ranged in concentration from 1.5 ppb (SBGW-9) to 720 ppb (SBGW-10). Total xylenes were detected in four (4) samples and ranged in concentration from 2.5 ppb (SBGW-12) to 980 ppb (SBGW-10). Ethylbenzene was detected in four (4) samples and ranged in concentration from 0.6 ppb (SBGW-12) to 200 ppb (SBGW-10). MTBE was detected in five (5) samples and ranged in concentration from 5.4 ppb (SBGW-15) to 250 ppb (SBGW-11). TAME was detected in three (3) samples and ranged in concentration from 7.3 ppb (SBGW-12) to 30 ppb (SBGW-11). TPHd was detected in three (3) samples and ranged in concentration from 61

ppb (SBGW13) to 180 ppb (SBGW-10). The analytical results are summarized in Table 3.

# 4.0 RECENT INVESTIGATION

Due to the prior detections of petroleum hydrocarbons in soil and groundwater, SounPacific oversaw further subsurface investigation at the Site on May 9, 10, and 11, 2006. The objective of the investigation was to further delineate the vertical and horizontal extent of the soil and groundwater impacted with petroleum hydrocarbons. The investigation consisted of drilling and sampling eight (8) borings (MW-1 through MW-8) and installing a groundwater monitoring well in each of the borings. The locations of the monitoring wells are shown on Figures 3 and 5.

#### 4.1 Soil Collection Procedures

Thirty-four (34) soil samples were collected on may 10, 11, and 12, 2006 from the well borings (MW-1 through MW-8), using a spilt-spoon sampler. The soil samples were collected by the field scientist for laboratory analysis and then inspected and documented by the onsite geologist for lithologic documentation of soil condition and classification using the Unified Soil Classification System. The boring logs are included in Appendix A. Soil samples were collected at a minimum of four (4) or five (5) feet intervals (depending on the boring), lithologic changes, and at the soil/groundwater interface down to a maximum depth of approximately 30 feet bgs. The samples were collected in appropriate containers, labeled, placed in coolers, and kept at approximately four degrees Celsius. All samples were transported to Basic Labs for laboratory analysis under appropriate chain-of-custody documentation (Appendix B).

### 4.2 Soil Sampling Methods

All soil samples were collected following the EPA guidelines for **SW 846 Method 5035** and analyzed for TPHg, BTXE, and five (5) fuel-oxygenates following **EPA Method 8260B**, and TPHmo and TPHd following **EPA Method 8015**.

### **4.3** Monitoring Well Construction

Eight (8) groundwater monitoring wells were installed during this investigation using eight (8)

inch diameter hollow stem augers. Sampling locations are graphically depicted on the boring logs which are included in Appendix A. The formation below 10 feet bgs consisted of water saturated heaving medium to fine sand. These heaving or flowing sand conditions caused the bottom of every hole to fill into the hollow stem augers to some degree.

Based on historical data showing the water table to be greater than 20 feet bgs, the final boring depth of each new well was proposed in the Work Plan to be 30 feet bgs. However, during drilling groundwater was encountered in most of the borings at a depth of approximately 11 feet bgs. This indicated a considerable fluctuation of the groundwater table depth throughout the hydrologic cycle at the Site. Therefore, it appeared unlikely that the 15 foot screen section proposed in the Work Plan could be placed to intersect the water table at all times of the year and still comply with the proposed well depth of approximately 30 feet. As a result, it was decided to install 20 feet of screen to assure water table capture throughout the year.

Due to the heaving sands it was not possible to install the majority of the wells to the maximum depth of each borings. Each monitoring well was constructed of two (2) inch diameter, clean, flush-threaded, PVC well materials. The well screen is 20 feet in length, consists of 0.01 inch machine cut slots, and extends from the bottom of the well to approximately eight (8) feet bgs (except for MW-8). A filter pack of #2-12 sand was placed in the annular space between the well casing and boring walls, and extends from the bottom of the boring to approximately 1.5 feet above the screened interval. An approximate five (5) foot layer of hydrated bentonite, as per county requirements, was placed on top of the sand filter pack. The remainer of the boring was filled with a cement slurry, and the surface was completed with a locking, waterproof, flushmounted, traffic-rated cover. Monitoring well construction details are included in Appendix A.

The depth of casing was approximately 28 feet in six (6) wells, 27.5 feet in one (1) well and only 23.5 feet in MW-8. Well completion diagrams for all monitoring wells are attached in Appendix A. Water level measurements during well development (May 15, 2006) and well sampling (May 18, 2006) confirmed that 15 feet of screen in a 30 foot well would have placed the screen below the top of the water table.

Following installation of the wells, a licensed surveyor determined the elevation and location of

each monitoring well at the Site to a status datum point according to Geotracker specifications as required by the NCRWQCB. All data is entered into the Geotracker database using the new x, y, z coordinate system as required by State law.

# 4.4 Monitoring Well Development and Groundwater Sampling

Each new well was developed using a purge pump or similar and surge block on May 15, 2006 (four to six days after installation). Well development continued until all fines had been removed and no turbidity was visually present. During development, the pH, conductivity, and temperature of the extracted water were measured at regular intervals to verify that representative samples of formation groundwater were present in the well. A total of 55 gallons of water were removed from all wells except MW-8 where only 30 gallons of water were removed.

Following well development, the wells were allowed to recharge for three (3) days prior to sampling. The first sampling event (Well Installation Sampling Event) was conducted on May 18, 2006. Stabilized groundwater levels were measured during this event. Three (3) well volumes of groundwater were purged from wells, again measuring pH, conductivity, temperature, and turbidity for signs of representative formation waters. Groundwater samples were taken from the wells with disposable PVC bailers or a peristaltic pump and disposable plastic tubing, stored in appropriate containers (i.e. VOA vials and amber bottles), placed in coolers with ice, kept at or below four (4) degrees Celsius, and transported to a State certified laboratory under Chain-of-Custody documentation for analysis (Appendix C).

#### 4.5 Groundwater Monitoring Program

Following the initial sampling, the new wells will be used to begin a groundwater monitoring program. The groundwater monitoring program will consist of monthly water level gauging and the collection of groundwater samples for laboratory analysis on a quarterly basis. Each sampling event will consist of measuring the depth to groundwater, purging the well a minimum of three (3) well volumes, and collecting a groundwater sample from the well for laboratory analysis. During purging activities, the extracted well water will be measured for pH, conductivity, temperature, and clarity for signs of representative formation waters. Groundwater

samples will be collected from the wells with disposable PVC bailers or a peristaltic pump and disposable plastic tubing, stored in appropriate containers (i.e. VOA vials and amber bottles), placed in coolers with ice, kept at or below four (4) degrees Celsius, and transported to a State of California certified laboratory under appropriate Chain-of-Custody documentation for analysis.

# 4.6 Groundwater from Monitoring Wells Analytical Methods

Groundwater samples from the monitoring wells were collected following standard EPA protocols (Appendix B). Based upon historical analytical results, all groundwater samples were analyzed for TPHg, BTXE and fuel-oxygenates following **EPA Method 8260b.** The samples were also analyzed for TPHd and TPHmo by **EPA Method 8015M.** All laboratory analyses were conducted by a State certified laboratory on a normal TAT.

# 5.0 RESULTS

### 5.1 Soil Analytical Results

Out of 34 samples, five (5) samples reported the presence of TPHg; however, all concentrations were below five (5) ppm. BTXE compounds and MTBE were reported in four (4) samples each; however, concentrations for all constituents were less than 0.1 ppm. The analytical results are summarized in Table 2, with the laboratory report in Appendix B.

#### 5.2 Groundwater Levels and Flow Direction

On May 15, 2006, prior to well development, the depth to groundwater in the site's eight monitoring wells was measured and ranged from 11.91 feet below top of casing (btc) in well MW-2 to 13.21 feet btc in MW-5. When corrected to mean sea level, water level elevations ranged from 40.86 feet amsl in MW-5 to 41.48 feet amsl in MW-7. Groundwater levels and elevations for each well are included in Table 1.

On May 18, 2006, prior to the sampling of the wells, the depth to groundwater was re-measured

in each of the eight (8) monitoring wells and ranged from 12.23 feet btc in well MW-2 to 13.51 feet btc in MW-5. When corrected to mean sea level, water level elevations ranged from 40.86 feet amsl in MW-5 to 41.48 feet amsl in MW-7. The groundwater levels and elevations for each well are included in Table 1. The groundwater flow and gradients for the May 18, 2006 gauging events are graphically depicted in Figure 3. Basic field data for the sampling event is presented below.

**Wells gauged:** MW-1, 2, 3, 4, 5, 6, 7, and 8

**Groundwater Depth:** Ranged from 12.23 to 13.51 feet btc (Table 1)

**Groundwater Elevation:** Ranged from 40.86 to 41.48 feet amsl (Table 1)

**Floating product:** Sheen reported in wells MW-3

**GW flow direction**: Southeast (Figure 3)

**GW gradient:** 0.01 feet/foot (Figure 3)

# 5.3 Well Development and Sampling Event Purge Data

Prior to sampling, all wells were purged; the groundwater field parameters for each well during both the well development and well purging are presented below and are included in Appendix E.

### MONITORING WELL MW-1 GROUNDWATER FIELD PARAMETERS

Date	Time	Total Vol. Removed/ (gal.)	pН	Temp/(F)	Cond./ms(cm)-1
5/15/06	12:59 pm	0	6.61	57.48	1.318
5/15/06	3:38	55	6.71	57.51	0.707
5/18/06	12:57 pm	0	6.90	57.34	1.178
5/18/06	1:03	2.6	7.15	57.32	1.172
5/18/06	1:09	5.1	7.15	57.33	1.170
5/18/06	1:15	7.7	7.14	57.32	1.170

# **MONITORING WELL MW-2 GROUNDWATER FIELD PARAMETERS**

Date	Time	Total Vol. Removed/ (gal.)	pН	Temp/(F)	Cond./ms(cm)-1
5/15/06	1:01 pm	0	6.46	56.33	0.744
5/15/06	3:56	55	6.10	56.24	0.486
5/18/06	1:20 pm	0	6.61	56.17	0.488
5/18/06	1:27	2.5	6.34	56.26	0.457
5/18/06	1:34	5.0	6.23	56.38	0.448
5/18/06	1:41	7.5	6.19	56.42	0.435

# **MONITORING WELL MW-3 GROUNDWATER FIELD PARAMETERS**

Date	Time	Total Vol. Removed/ (gal.)	pН	Temp/(F)	Cond./ms(cm)-1
5/15/06	1:04 pm	0	6.31	57.34	1.139
5/15/06	4:52	55	5.82	57.48	0.775
5/18/06	1:47 pm	0	6.49	57.09	1.174
5/18/06	1:55	2.4	6.72	57.14	1.170
5/18/06	2:04	4.9	6.69	57.16	1.168
5/18/06	2:10	7.3	6.75	57.16	1.168

# MONITORING WELL MW-4 GROUNDWATER FIELD PARAMETERS

Date	Time	Total Vol. Removed/ (gal.)	pH Temp/(F)		Cond./ms(cm)-1
5/15/06	12:57 pm	0	6.71	57.12	0.496
5/15/06	3:08	55	6.53	57.39	0.329
5/18/06	12:02 pm	0	6.24	56.87	0.271
5/18/06	12:12	2.4	6.54	57.13	0.266
5/18/06	12:20	4.9	6.77	57.07	0.263
5/18/06	12:27	7.3	6.90	57.17	0.268

# MONITORING WELL MW-5 GROUNDWATER FIELD PARAMETERS

Date	Time	Total Vol. Removed/ (gal.)	pН	Temp/(F)	Cond./ms(cm)-1
5/15/06	1:07 pm	0	6.65	57.66	1.179
5/15/06	4:19	55	6.66	57.87	0.753
5/18/06	2:14 pm	0	6.88	57.42	1.163
5/18/06	2:20	2.3	6.97	57.55	1.160
5/18/06	2:26	4.6	6.96	57.61	1.160
5/18/06	2:32	7.0	6.95	57.53	1.157

# **MONITORING WELL MW-6 GROUNDWATER FIELD PARAMETERS**

Date	Time	Total Vol. Removed/ (gal.)	pН	Temp/(F)	Cond./ms(cm)-1
5/15/06	12:53 pm	0	6.26	58.66	0.441
5/15/06	3:12	55	6.24	58.73	0.359
5/18/06	12:31 pm	0	6.59	58.56	0.307
5/18/06	12:38	2.4	6.55	58.64	0.311
5/18/06	12:45	4.9	6.57	58.60	0.306
5/18/06	12:51	7.3	6.55	58.58	0.299

# MONITORING WELL MW-7 GROUNDWATER FIELD PARAMETERS

Date	Time	Total Vol. Removed/ (gal.)	pН	Temp/(F)	Cond./ms(cm)-1
5/15/06	12:50 pm	0	6.07	57.34	0.254
5/15/06	2:11	55	5.86	57.51	0.277
5/18/06	3:07 pm	0	6.80	57.15	0.159
5/18/06	3:14	2.5	6.51	57.28	0.182
5/18/06	3:21	5.0	6.23	57.15	0.176
5/18/06	3:29	7.6	6.15	57.08	0.175

#### MONITORING WELL MW-8 GROUNDWATER FIELD PARAMETERS

Date	Time	Total Vol. Removed/ (gal.)	pН	Temp/(F)	Cond./ms(cm)-1
5/15/06	1:10 pm	0	6.94	57.35	0.890
5/15/06	4:33	30	6.41	59.64	0.527
5/18/06	2:37 pm	0	7.22	56.96	0.317
5/18/06	2:45	1.7	7.12	57.15	0.282
5/18/06	2:58	3.4	7.12	57.25	0.271
5/18/06	3:05	5.1	7.12	57.29	0.267

# 5.4 Groundwater Analytical Results Summary

Groundwater samples collected from each of the new monitoring wells after development and purging reported TPHg, BTXE, MTBE, tertiary amyl methyl ether (TAME), TBA, and TPHd. MW-3 and MW-5 reported TPHg at 22,200 ppb and 88.1 ppb, respectively, but was not reported in any of the other wells. BTXE compounds were present in MW-3 only, at 14.2 ppb (benzene), 1,420 ppb (toluene), 2,350 ppb (xylenes), and 611 ppb (ethylbenzene). MTBE was detected in four (4) wells at concentrations of 7.4 ppb (MW-1), 3.7 ppb (MW-4), 64.6 ppb (MW-5), and 1.4 ppb in MW-6. TAME was detected in two (2) wells at concentrations of 2.5 ppb (MW-1) and 4.2 ppb in MW-5. TBA was detected at a concentration of 60.0 ppb in MW-5, while TPHd was detected in MW-4 at a concentration of 3,530 ppb. The results are present in Table 5, and Figure 5, with the results plotted on a site plan and presented as "Groundwater Analytical Results." The laboratory report is included as Appendix C.

# 6.0 SITE SANITATION PROCEDURES

All drill cuttings and groundwater extracted from wells and boreholes were stored onsite in D.O.T. 17E/17H 55-gallon drums. Based upon the results of laboratory analyses drilling cuttings will either be left onsite or disposed as a non-hazardous waste. Purge/development waters and rinsate generated from steam cleaning, drilling, development, and sampling equipment is contained and stored at the Site in D.O.T. 17E/17H 55-gallon drums. Following the conducting of the next groundwater monitoring event, the retained water will be resampled, and disposal options will be evaluated

# 7.0 SUMMARY OF INVESTIGATION

Soil sampling at the Site has indicated that the extent and degree of soil contamination are minimal. Soil contamination is limited to the margins of the former USTs, with the highest reported concentration of TPHg soil contamination being 120 ppm, which is only slightly above a clean-up standard of 100 ppm. Therefore, no independent soil remediation appears to be required, with the clean-up standard being achieved over time through natural attenuation.

Groundwater contamination is more widespread; however, the full extent of the groundwater impact is currently undefined to the east under Northcrest Drive and to the southeast under the intersection of Northcrest Drive and Washington Boulevard. No indication of vertical migration of concern of MTBE was identified, with no MTBE being reported at depths greater than 16 feet bgs in the soil samples. In the groundwater, significantly elevated levels of TPHg were restricted to a single well, MW-3, which is located approximately 30 feet downgradient of the gasoline USTs dispensers on the property's eastern boundary. MTBE is the most widespread contaminant of concern, being reported in five (5) of the eight (8) wells, and throughout the whole southeast portion of the Site.

# 8.0 SITE CONCEPTUAL MODEL

The objective of a site conceptual model is to present sufficient information to: (1) identify the source(s) of the contamination; (2) determine the nature and extent of the contamination; (3) specify potential exposure pathways; and (4) identify potential receptors that may be adversely impacted by the contamination.

The Site's geology has been determined from the findings of the January 2003, September 2004, and May 2006 site investigations. These investigations determined that the Site is primarily underlain by interbedded silty sand and sand, which become coarser with depth (grading sequence). A thin clay layer (approximately one (1) foot thick), was present across portions of the Site at a depth of approximately five (5) feet bgs. Sandy clay to clayey sand was encountered in MW-3 at a depth of 29 feet. If this layer persists in both aerial extent and depth, it may form a barrier to vertical migration. The depth to groundwater has been determined from the wells installed at the Site. Based on data from the wells it has been determined that the average depth

to groundwater in May 2006 was approximately 12.5 feet bgs, with a southeasterly groundwater flow direction at a shallow gradient. Based on historical data, this depth to groundwater may be a seasonal high, with groundwater levels being as deep as 20 feet bgs at the end of the dry season.

In 1989, eight (8) USTs, which were used to store various petroleum products, were removed from four (4) locations at the Northcrest 76 facility. Following the removal of the USTs, laboratory analysis of soil samples from excavations reported TPHg, at low concentrations in one (1) from the premium unleaded UST excavation in the northern portion of the Site and one (1) from the multi-tank location on the northside of the Mini-Mart building, in the northwest portion of the Site. No petroleum contaminants were reported at the site of the two (2) former unleaded gasoline USTs in the central area of the Site or the other UST locations. Although TPHg was present, no further action was required at that time. The removed USTs were replaced with three (3) larger USTs in the southeast portion of the property.

In August 2001, during a routine inspection, impacted soil was detected beneath one (1) of the fuel dispensers. This area was also the Site of the unleaded USTs removed in 1989, where no impact was identified following their removal. The presence of the impact in an area which had previously been determined to be free of contamination indicated that the source of the contamination was the UST piping and/or fuel dispenser system.

Subsequent soil sampling across the Site in January 2003 did not identify any TPHg or BTXE compounds in the soil of the six (6) soil borings sampled to a depth of 12 feet bgs. However, MTBE at less than 1.0 ppm was reported in five (5) of the soil samples collected from the two (2) borings located between the new USTs and the area of the dispensers. The absence of the TPHg at depth indicating that the near surface contamination identified in the vicinity of the dispensers had not migrated, or the soil, which is predominantly sand, had not retained any of the contamination.

Further subsurface investigation was conducted in September 2004 during which soil and grab groundwater samples were collected. This investigation involved drilling nine (9) borings (B-7 through B-15) across the Site, of which three (3) borings (B-8, B-9, and B-10) were located in

the vicinity of the dispensers. The remaining borings, with the exception of boring (B-7), were located in the suspected down gradient direction and in the vicinity of the new USTs. Six (6) to nine (9) soil samples were collected and analyzed from each boring, and with the exception of four (4) samples, no TPHg contamination was identified in any of the samples. Of the four (4) samples that reported TPHg, two (2) samples reported TPHg at the reporting limit. The remaining two (2) samples were collected from borings B-9 and B-10, in the area of the "leaking" dispenser(s), and reported significantly higher concentrations at depths just above the water table (4,000 ppm, at 18 feet in boring B-9 and 890 ppm at 17 feet in boring B-10). In both B-9 and B-10, the soil samples collected from shallower depths were non-detect for TPHg. TPHd was in eight (8) samples, of which seven (7) were from borings B-9 and B-10; however, with one (1) exception (B-10 @ 17' reported 110 ppm), all concentrations were below 11 ppm, and are not considered to be of concern. Toluene was reported in two (2) samples (7.9 ppm in B-10 @ 20 feet and 0.021 ppm in B-11 @ 20 feet). Total xylenes were reported in nine (9) samples, eight (8) of which were in samples from B-9 and B-10; however, five (5) samples reported concentrations less than 0.1 ppm. As with the total xylenes, the five (5) of the six (6) samples that reported ethylbenzene were from borings B-9 and B-10, of which four (4) reported concentrations less than 1.6 ppm. The highest concentrations of total xylenes and ethylbenzene were in the same samples that reported the elevated TPHg. The fuel oxygenates, MTBE (20) samples), TAME (12 samples), and TBA (8 samples) were reported in a number of the analyzed soil samples. Whereas the TPH's and aromatic hydrocarbons were predominantly in the soil samples from borings B-9 and B-10, the fuel oxygenates were predominantly in the soil samples from borings B-11, B-12, B-13, B-14, and B-15, which are down gradient of the area where petroleum hydrocarbons were initially identified. However, it should be noted that the reported levels in B-9 and B-10 were elevated and may have masked the presence of any fuel oxygenates. When present, the fuel oxygenates were at low concentrations, with 0.8 ppm being exceeded in only one (1) sample (B-12 @ 8 feet), where MTBE and TBA were at concentrations of 4.1 ppm and 2.2 ppm, respectively.

Analysis of the grab groundwater collected during the September 2004 subsurface investigation, reported TPHg in the groundwater from borings B-10, B-11, and B-12. Select BTXE compounds were reported in the groundwater sample from B-9, in addition to the borings that reported TPHg. MTBE was in the groundwater from the same borings that reported TPHg, plus

The distribution of the petroleum hydrocarbons in the soil indicates that the impact originated from the location of the current dispensers and the former unleaded gasoline USTs. The presence of the contamination in the surface soil, and the fact that the clean soil would have been placed at its current location during the backfilling of the UST excavation, indicates that the source of the impact was more than likely the dispensers. The only other impacted soil is within the capillary fringe at the Site, which show significant seasonal variation. The absence of soil contamination in the vadose zone may be due to a couple of reasons, these would include soil borings that were not drilled in the areas where a soil impact originally occurred; the subsurface soil in the areas of potential contamination consist predominantly of sand or of coarse grained imported fill, which would have limited their ability to retain any petroleum hydrocarbons migrating through them.

Groundwater is impacted with TPHg, the BTEX compounds, and fuel oxygenates, particularly MTBE, at concentrations of concern. No groundwater contamination was identified in the area directly beneath the dispensers or the former USTs; however, groundwater contamination was identified in the area downgradient, to the southeast of the dispensers. The cross gradient limits of the groundwater contamination has been defined; however, the full downgradient extent has yet to be defined, with wells MW-5, and particularly MW-3, both reporting elevated levels of petroleum hydrocarbons. Monitoring well MW-3 is located on the property boundary, adjacent to Northcrest Drive, and due to the high TPHg and BTEX concentrations it is likely to have migrated beneath Northcest Drive. The concentrations in MW-5 are significantly lower, and hence the contamination may be restricted to the Site. As well MW-3 is impacted and on the property boundary, it is assumed that the contamination has migrated offsite; however, there are no known sensitive receptors in the immediate area but it is recommended that a sensitive receptor survey be conducted at this Site in an effort to reduce the chance that a sensitive receptor has been impacted or could be threatened.

# 9.0 SUMMARY AND RECOMMENDATIONS

To date five (5) phases of subsurface evaluation have been conducted at the Site. The first

phase in 1989, was related to the removal of the facility's original USTs, and did not identify any contamination of concern. The second phase (2001) was conducted following the identification of a pipe leaking beneath the dispensers, during which significant petroleum hydrocarbon surface soil contamination was identified. Subsequent phases of work were conducted in January 2003, September 2004, and May 2006, which identified minimal soil contamination, but determined that the groundwater was impacted and the impact had migrated from the dispenser area in a southeasterly direction and likely offsite. The cross gradient extent of the impacted groundwater has been partly defined, using both temporary well grab samples and monitoring well samples; however, the groundwater contamination has migrated likely offsite and the full eastern and southeastern extent has not been defined. As a result the following further actions are proposed.

- Quarterly groundwater monitoring should continue for a minimum of one (1) year. This
  will include monthly water level measuring, along with quarterly groundwater sampling
  and analysis.
- Further subsurface investigation should be conducted at offsite locations, downgradient of the Site. The work should involve a series of hydro-punch or similar type locations from which grab groundwater samples can be collected to assess the extent of the groundwater contamination. Once the limits of the groundwater contamination have been defined, additional groundwater monitoring wells should be installed to monitor contaminant levels and any contaminant migration.
- SounPacific recommends conducting a sensitive receptor survey within 1000 foot radius
  of the Site looking primarily for water wells, creeks, low lying wet lands and marches,
  and/or similar receptors.

# **CERTIFICATION**

This report was prepared under the direct supervision of a California registered geologist at SounPacific. All information provided in this report including statements, conclusions and recommendations are based solely on field observations and analyses performed by a state-certified laboratory. SounPacific is not responsible for laboratory errors.

SounPacific promises to perform all its work in a manner that is used by members in similar professions working in the same geographic area. SounPacific will do whatever is reasonable to ensure that data collection is accurate. Please note however, that rain, buried utilities, and other factors can influence groundwater depths, directions and other factors beyond what SounPacific could reasonably determine.

# **SounPacific**

Prepared by:

Greg Sounhein, REA # 07994

Project Manager

Reviewed by:

Michael Sellens, RG # 4714, REA # 07890

Principal Geologist

No. 07994

Expires: 06

# **Tables**

# Table 1 Water Levels

Northcrest 76 1500 Northcrest Drive Crescent City, California 95531

Sample Location	Date	Depth to Bottom/ Feet BToC	Survey Height/ Feet AMSL	Depth to Water/ Feet BToC	Adjusted Elevation/ Feet AMSL	Thickness of Floating Product/ Feet
MW-1	5/15/2006	27.64	53.70	12.31	41.39	0.00
IVI VV - I	5/18/2006	28.80	53.70	12.82	40.88	0.00
MW-2	5/15/2006	26.27	53.44	11.91	41.53	0.00
IVI VV -2	5/18/2006	27.92	53.44	12.23	41.21	0.00
MW-3	5/15/2006	26.04	53.52	12.28	41.24	0.00
IVI VV -3	5/18/2006	28.09	53.52	12.93	40.59	0.00
MW-4	5/15/2006	25.88	53.65	12.18	41.47	0.00
IVI VV -4	5/18/2006	27.80	53.65	12.61	41.04	0.00
MW-5	5/15/2006	26.28	54.07	13.21	40.86	0.00
IVI VV -3	5/18/2006	27.98	54.07	13.51	40.56	0.00
MW-6	5/15/2006	26.78	53.75	12.65	41.10	0.00
IVI VV -0	5/18/2006	28.11	53.75	12.98	40.77	0.00
MW-7	5/15/2006	25.74	53.45	11.97	41.48	0.00
IVI VV - /	5/18/2006	28.08	53.45	12.33	41.12	0.00
MW-8	5/15/2006	23.30	53.73	12.37	41.36	0.00
1 <b>V1 VV</b> -O	5/18/2006	23.23	53.73	12.67	41.06	0.00

Notes:

BToC: Below Top of Casing AMSL: Above Mean Sea Level

#### Table 2 Soil Analytical Results

Sample ID	Sample Location	Sample Date	TPHg (ppm)	Benzene (ppm)	Toluene (ppm)	Xylenes (ppm)	Ethylbenzene (ppm)	MTBE (ppm)	DIPE (ppm)	TAME (ppm)	ETBE (ppm)	TBA (ppm)	TPHd (ppm)	TPHmo (ppm)	EDB (ppm)	Methanol (ppm)	Ethanol (ppm)
1-1A	1-1A	1/10/1989	ND < 5	ND < .05	ND < .05	ND < .05	ND < .05										
2-2A	2-2A	1/10/1989	15	ND < .05	ND < .05	ND < .05	ND < .05										
3-3A	3-3A	1/10/1989		ND < .05	ND < .05	ND < .05	ND < .05						ND < 10				
4-4A	4-4A	1/10/1989	6.0	ND < .05	ND < .05	ND < .05	ND < .05										
5-5A	5-5A	1/10/1989		ND < .05	ND < .05	ND < .05	ND < .05						ND < 10				
6-6A	6-6A	1/10/1989	ND < 5	ND < .05	ND < .05	ND < .05	ND < .05										
7-7A	7-7A	1/10/1989	ND < 5	ND < .05	ND < .05	ND < .05	ND < .05										
dispenser soil	unknown	8/16/2001	3,100	21	450	198	38	ND < 25									
D-1 @ 2.5'	D-1	10/2/2001	9,060	16	454	582	101	ND < 25	ND < 25	ND < 25	ND < 25	ND < 25,000					
D-2 @ 2.5'	D-2	10/2/2001	82.0	0.699	4.95	3.01	0.449	5.94	ND < 0.125	2.12	ND < 0.125	ND < 125					
D-3 @ 3'	D-3	10/2/2001	4,340	18.3	531	822	127	ND < 12.5	ND < 12.5	ND < 12.5	ND < 12.5	ND < 12,500					
PR-1 @ 2.5'	PR-1	10/2/2001	280	1.86	26.3	8.85	1.72	18.3	ND < 0.125	ND < 0.125	ND < 0.125	ND < 125					
SB-1 @ 4'	B-1	1/28/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10	ND < 0.005	15	ND < 0.10
SB-1 @ 8'	B-1	1/28/2003	ND < 1.0										ND < 1.0	ND < 10			
SB-1 @ 12'	B-1	1/28/2003	ND < 1.0										ND < 1.0	ND < 10			
SB-2 @ 4.5'	B-2	1/17/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005					ND < 1.0	ND < 10			
SB-2 @ 8'	B-2	1/17/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01		ND < 0.005					ND < 1.0				
SB-2 @ 12'	B-2	1/17/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005					ND < 1.0	ND < 10			
SB-3 @ 4'	B-3	1/22/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005					ND < 1.0	ND < 10			
SB-3 @ 8'	B-3	1/22/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005					ND < 1.0	ND < 10			
SB-3 @ 12'	B-3	1/22/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005					ND < 1.0	ND < 10			
SB-4 @ 4'	B-4	1/28/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	0.16					1.5	ND < 10			
SB-4 @ 8'	B-4	1/28/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	0.047					ND < 1.0	ND < 10			
SB-4 @ 12'	B-4	1/28/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	0.92					ND < 1.0	ND < 10			
SB-5 @ 4'	B-5	1/28/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005					ND < 1.0	ND < 10			
SB-5 @ 8'	B-5	1/28/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	0.095					ND < 1.0	ND < 10			
SB-5 @ 12'	B-5	1/28/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	0.053					1.5	ND < 10			
SB-6 @ 5'	B-6	1/22/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005					ND < 1.0				
SB-6 @ 8'	B-6	1/22/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005					ND < 1.0	ND < 10			
SB-6 @ 12'	B-6	1/22/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005					ND < 1.0	ND < 10			

Sample ID	Sample Location	Sample Date	Cadmium (ppm)	Chromium (ppm)	Copper (ppm)	Lead (ppm)	Nickel (ppm)	Zinc (ppm)
SB-1 @ 4'	B-1	1/28/2003	ND < 0.50	190	14	13	140	39
SB-1 @ 8'	B-1	1/28/2003	ND < 0.50	200	12	ND < 1.0	160	25
SB-1 @ 12'	B-1	1/28/2003	ND < 0.50	190	11	ND < 1.0	170	25

Sample ID	Sample Location	Sample Date	TPHg (ppm)	Benzene (ppm)	Toluene (ppm)	Xylenes (ppm)	Ethylbenzene (ppm)	MTBE (ppm)	DIPE (ppm)	TAME (ppm)	ETBE (ppm)	TBA (ppm)	TPHd (ppm)	TPHmo (ppm)	EDB (ppm)	Methanol (ppm)	Ethanol (ppm)
SB-7 @ 4'	B-7	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10			
SB-7 @ 8'	B-7	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10			
SB-7 @ 12'	B-7	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10			
SB-7 @ 16'	B-7	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10			
SB-7 @ 20'	B-7	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10			
SB-7 @ 24'	B-7	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005			ND < 0.005	ND < 0.005	ND < 0.05	1.3	ND < 10			
SB-8 @ 3'	B-8	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005				ND < 0.005	ND < 0.05	ND < 1.0	ND < 10			
SB-8 @ 7'	B-8	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10			
SB-8 @ 12'	B-8	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005		ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05					
SB-8 @ 16'	B-8	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005		ND < 0.005		ND < 0.005	ND < 0.05					
SB-8 @ 20'	B-8	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10			
SB-8 @ 22'	B-8	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10			
SB-9 @ 4'	B-9	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 1.0			
SB-9 @ 5.5'	B-9	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10			
SB-9 @ 8'	B-9	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	0.011	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10			
SB-9 @ 12'	B-9	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10			
SB-9 @ 16'	B-9	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10			
SB-9 @ 18'	B-9	9/29/2004	4,000	ND < 2.5	ND < 2.5	226	80	ND < 2.5	ND < 2.5	ND < 2.5	ND < 2.5	ND < 25	11	ND < 10			
SB-9 @ 22'	B-9	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10			
SB-9 @ 24'	B-9	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10			
SB-10 @ 3'	B-10	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	0.062	0.019	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	1.2	30			
SB-10 @ 8'	B-10	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	0.008	ND < 0.005			ND < 0.005	ND < 0.005	ND < 0.05					
SB-10 @ 9'	B-10	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	0.005	ND < 0.005		ND < 0.005		ND < 0.005	ND < 0.05	3.7	ND < 10			
SB-10 @ 12'	B-10	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10			
SB-10 @ 14'	B-10	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	0.006	ND < 0.005	0.015	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	1.4	ND < 10			
SB-10 @ 16'	B-10	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	0.011	0.012	0.011	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	1.0	ND < 10			
SB-10 @ 17'	B-10	9/29/2004	890	ND < 5.0	ND < 5.0	132	29	ND < 5.0	ND < 5.0	ND < 5.0	ND < 5.0	ND < 5.0	110	ND < 10			
SB-10 @ 20'	B-10	9/29/2004	ND < 110	ND < 1.1	7.9	8.7	1.6	ND < 1.1	ND < 1.1	ND < 1.1	ND < 1.1	ND < 11	1.3	ND < 10			
SB-10 @ 24'	B-10	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10			

Sample ID	Sample Location	Sample Date	TPHg (ppm)	Benzene (ppm)	Toluene (ppm)	Xylenes (ppm)	Ethylbenzene (ppm)	MTBE (ppm)	DIPE (ppm)	TAME (ppm)	ETBE (ppm)	TBA (ppm)	TPHd (ppm)	TPHmo (ppm)	EDB (ppm)	Methanol (ppm)	Ethanol (ppm)
SB-11 @ 4'	B-11	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10			
SB-11 @ 8'	B-11	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10			
SB-11 @ 12'	B-11	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	0.082	ND < 0.005	0.006	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10			
SB-11 @ 14.5'	B-11	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	0.14	ND < 0.005	0.01	ND < 0.005	0.16	ND < 1.0	ND < 10			
SB-11 @ 20'	B-11	9/29/2004	1.2	ND < 0.005	0.021	0.041	0.078	0.25	ND < 0.005	0.027	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10			
SB-11 @ 24'	B-11	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10			
SB-12 @ 4'	B-12	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	0.007	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10			
SB-12 @ 8'	B-12	9/29/2004	1	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	4.1	ND < 0.005	0.17	ND < 0.005	2.2		ND < 10			
SB-12 @ 12'	B-12	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	0.69	ND < 0.005	0.013	ND < 0.005	0.33		ND < 10			
SB-12 @ 16'	B-12	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	0.3	ND < 0.005	0.008	ND < 0.005	0.19	ND < 1.0	ND < 10			
SB-12 @ 20'	B-12	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	0.35	ND < 0.005	0.018	ND < 0.005	0.086	ND < 1.0	ND < 10			
SB-12 @ 24'	B-12	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10			
SB-13 @ 4'	B-13	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	21			
SB-13 @ 8'	B-13	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	0.062	ND < 0.005	0.007	ND < 0.005	0.16	ND < 1.0	ND < 10			
SB-13 @ 12'	B-13	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	0.76	ND < 0.005	0.084	ND < 0.005	0.11	ND < 1.0	ND < 10			
SB-13 @ 16'	B-13	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	0.083	ND < 0.005	0.006	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10			
SB-13 @ 20'	B-13	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.45	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10			
SB-13 @ 21'	B-13	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10			
SB-14 @ 4'	B-14	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	39			
SB-14 @ 8'	B-14	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	0.007	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10			
SB-14 @ 12'	B-14	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	0.24	ND < 0.005	0.025	ND < 0.005	0.094	ND < 1.0	ND < 10			
SB-14 @ 16'	B-14	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	0.039	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10			
SB-14 @ 20'	B-14	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	1	ND < 10			
SB-14 @ 24'	B-14	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10			
SB-15 @ 4'	B-15	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10			
SB-15 @ 8'	B-15	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	0.007	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10			
SB-15 @ 12'	B-15	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	0.49	ND < 0.005	0.029	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10			
SB-15 @ 16'	B-15	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	0.069	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10			
SB-15 @ 20'	B-15	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10			
SB-15 @ 24'	B-15	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10			

Northcrest 76 1500 Northcrest Drive Crescent City, California 95531

Sample ID	Sample Location	Sample Date	TPHg (ppm)	Benzene (ppm)	Toluene (ppm)	Xylenes (ppm)	Ethylbenzene (ppm)	MTBE (ppm)	DIPE (ppm)	TAME (ppm)	ETBE (ppm)	TBA (ppm)	TPHd (ppm)	TPHmo (ppm)	EDB (ppm)	 Ethanol (ppm)
MW-1 @ 9'	MW-1	5/9/2006	ND < 0.0600	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	17.2	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0500	ND < 1.0	ND < 10		 
MW-1 @ 13'	MW-1	5/9/2006	ND < 0.0600	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0500	ND < 1.0	ND < 10		 
MW-1 @ 17'	MW-1	5/9/2006	ND < 0.0600	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0500	ND < 1.0	ND < 10		 
MW-1 @ 21'	MW-1	5/9/2006	ND < 0.0600	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0500	ND < 1.0	ND < 10		 
MW-1 @ 25'	MW-1	5/9/2006	ND < 0.0600	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0500	ND < 1.0	ND < 10		 
MW-2 @ 8'	MW-2	5/10/2006	ND < 0.0600	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0500	ND < 1.0	ND < 10		 
MW-2 @ 12'	MW-2	5/10/2006	ND < 0.0600	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0500	ND < 1.0	ND < 10		 
MW-2 @ 16'	MW-2	5/10/2006	ND < 0.0600	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0500	ND < 1.0	ND < 10		 
MW-2 @ 20'	MW-2	5/10/2006	ND < 0.0600	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0500	ND < 1.0	ND < 10		 
MW-2 @ 24'	MW-2	5/10/2006	ND < 0.0600	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0500	ND < 1.0	ND < 10		 
MW-2 @ 28'	MW-2	5/10/2006	ND < 0.0600	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0500	ND < 1.0	ND < 10		 
MW-3 @ 10'	MW-3	5/10/2006	ND < 0.0600	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0500	ND < 1.0	ND < 10		 
MW-3 @ 15'	MW-3	5/10/2006	2.900	ND < 0.0050	ND < 0.0050	0.052	0.0347	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0500	ND < 1.0	ND < 10		 
MW-3 @ 20'	MW-3	5/10/2006	2.670	ND < 0.0050	0.0156	0.0719	0.0991	0.0088	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0500	ND < 1.0	ND < 10		 
MW-3 @ 30'	MW-3	5/10/2006	0.166	ND < 0.0050	0.0161	0.0193	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0500	ND < 1.0	ND < 10		 
MW-4 @ 8'	MW-4	5/9/2006	0.063	0.0083	ND < 0.0050	ND < 0.0050	ND < 0.0050	0.0114	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0500	ND < 1.0	ND < 10		 
MW-4 @ 12'	MW-4	5/9/2006	ND < 0.0600	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	0.0295	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0500	ND < 1.0	ND < 10		 
MW-4 @ 16'	MW-4	5/9/2006	ND < 0.0600	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0500	ND < 1.0	ND < 10		 
MW-4 @ 20'	MW-4	5/9/2006	ND < 0.0600	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0500	ND < 1.0	ND < 10		 
MW-4 @ 24'	MW-4	5/9/2006	ND < 0.0600	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0500	ND < 1.0	ND < 10		 
MW-4 @ 28'	MW-4	5/9/2006	ND < 0.0600	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0500	ND < 1.0	ND < 10		 
MW-5 @ 8'	MW-5	5/10/2006	ND < 0.0600	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0500	ND < 1.0	ND < 10		 
MW-5 @ 10'	MW-5	5/10/2006	0.072	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	0.0758	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0500	ND < 1.0	ND < 10		 
MW-6 @ 10'	MW-6	5/11/2006	ND < 0.0600	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0500	ND < 1.0	ND < 10		 
MW-6 @ 15'	MW-6	5/11/2006	ND < 0.0600	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0500	ND < 1.0	ND < 10		 
MW-6 @ 20'	MW-6	5/11/2006	ND < 0.0600	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0500	ND < 1.0	ND < 10		 
MW-7 @ 10'	MW-7	5/11/2006	ND < 0.0600	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0500	ND < 1.0	ND < 10		 
MW-7 @ 15'	MW-7	5/11/2006	ND < 0.0600	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0500	ND < 1.0	ND < 10		 
MW-7 @ 20'	MW-7	5/11/2006	ND < 0.0600	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0500	ND < 1.0	ND < 10		 
MW-8 @ 8'	MW-8	5/9/2006	ND < 0.0600	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0500	ND < 1.0	ND < 10		 
MW-8 @ 12'	MW-8	5/9/2006	ND < 0.0600	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0500	ND < 1.0	ND < 10		 
MW-8 @ 16'	MW-8	5/9/2006	ND < 0.0600	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0500	ND < 1.0	ND < 10		 ]
MW-8 @ 20'	MW-8	5/9/2006	ND < 0.0600	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0500	ND < 1.0	ND < 10		 
MW-8 @ 24'	MW-8	5/9/2006	ND < 0.0600	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0500	ND < 1.0	ND < 10		 
MW-8 @ 28'	MW-8	5/9/2006	ND < 0.0600	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0050	ND < 0.0500	ND < 1.0	ND < 10		 

Notes:

TPHg: Total petroleum hydrocarbons as gasoline. TBA: Tertiary butanol

MTBE: Methyl tertiary butyl ether TPHd: Total petroleum hydrocarbons as diesel.

DIPE: Diisopropyl ether EDB: 1,2-Dibromoethane

TAME: Tertiary amyl methyl ether ppm: parts per million =  $\mu g/g = mg/kg = 1000 \ \mu g/kg$ 

ETBE: Ethyl tertiary butyl ether ND: Not detected. Sample was detected below the method detection limit as shown.

Northcrest 76 1500 Northcrest Drive Crescent City, California 95531

Sample ID	SB	-1@4'	Sample ID	SB-1@4'			
Sample Date	1/2	8/2003	Sample Date	1/28	/2003		
ANALYTE	R/L	Results/ppm	ANALYTE	R/L	Results/ppm		
Dichlorodiflouromethane	0.005	ND	Dibromochloromethane	0.005	ND		
Chloromethane	0.005	ND	1,2-Dibromoethane	0.005	ND		
Vinyl chloride	0.005	ND	Chlorobenzene	0.005	ND		
Bromomethane	0.005	ND	1,1,1,2-Tetrachloroethane	0.005	ND		
Chloroethane	0.005	ND	Ethylbenzene	0.005	ND		
Trichlorofluoromethane	0.005	ND	m,p-Xylene	0.005	ND		
Acetone	0.05	ND	o-Xylene	0.005	ND		
1,1-Dichloroethene	0.005	ND	Styrene	0.005	ND		
Iodomethane	0.005	ND	Bromoform	0.005	ND		
Methylene chloride	0.005	ND	Isopropylbenzene	0.005	ND		
Carbon disulfide	0.005	ND	Bromobenzene	0.005	ND		
trans-1,2-Dichloroethene	0.005	ND	1,1,2,2-Tetrachloroethane	0.005	ND		
1,1-Dichloroethane	0.005	ND	1,2,3-Trichloropropane	0.005	ND		
2-Butanone	0.05	ND	n-Propylbenzene	0.005	ND		
2,2-Dichloropropane	0.005	ND	2-Chlorotoluene	0.005	ND		
cis-1,2-Dichloroethene	0.005	ND	4-Chlorotoluene	0.005	ND		
Bromochloromethane	0.005	ND	1,3,5-Trimethylbenzene	0.005	ND		
Chloroform	0.005	ND	tert-Butylbenzene	0.005	ND		
1,1,1-Trichloroethane	0.005	ND	1,2,4-Trimethylbenzene	0.005	ND		
Carbon tetrachloride	0.005	ND	sec-Butylbenzene	0.005	ND		
1,1-Dichloropropene	0.005	ND	1,3-Dichlorobenzene	0.005	ND		
Benzene	0.005	ND	4-Isopropyltoluene	0.005	ND		
1,2-Dichloroethane	0.005	ND	1,4-Dichlorobenzene	0.005	ND		
Trichloroethene	0.005	ND	1,2-Dichlorobenzene	0.005	ND		
1,2-Dichloropropane	0.005	ND	n-Butylbenzene	0.005	ND		
Dibromomethane	0.005	ND	1,2-Dibromo-3-chloropropane	0.005	ND		
Bromodichloromethane	0.005	ND	1,2,4-Trichlorobenzene	0.005	ND		
cis-1,3-Dichloropropene	0.005	ND	Hexachlorobutadiene	0.005	ND		
4-Methyl-2-pentanone	0.05	ND	Naphthalene	0.005	ND		
Toluene	0.005	ND	1,2,3-Trichlorobenzene	0.005	ND		
trans-1,3-Dichloropropene	0.005	ND	Ethanol	0.10	ND		
1,1,2-Trichloroethane	0.005	ND	tert-Butanol	0.05	ND		
Tetrachloroethene	0.005	ND	MTBE	0.005	ND		
1,3-Dichloropropane	0.005	ND	Diisopropyl ether	0.005	ND		
2-Hexanone	0.05	ND	Tethyl tert-butyl ether	0.005	ND		
1,2-Dibromoethane	0.005	ND	tert-Amyl methyl ether	0.005	ND		

#### Notes:

TPHg: Total petroleum hydrocarbons as gasoline TPHd: Total petroleum hydrocarbons as diesel

MTBE: Methyl tertiary butyl ether ETBE: Ethyl tertiary butyl ether

TAME: Tertiary amyl methyl ether TBA: Tertiary butanol

DIPE: Diisopropyl ether ppm: parts per million =  $\mu g/g = mg/kg = 1000 \mu g/kg$ .

TPHmo: Total petroleum hydrocarbons as motor oil EDB: 1,2-dibromoethane

ND: Not detected at or above the method detection limit as shown.

# **Table 3 Groundwater Analytical Results**

Northcrest 76 1500 Northcrest Drive Crescent City, California 95531

Sample ID	Sample Location	Sample Date	TPHg (ppb)	Benzene (ppb)	Toluene (ppb)	Xylenes (ppb)	Ethylbenzene (ppb)	MTBE (ppb)	DIPE (ppb)	TAME (ppb)	ETBE (ppb)	TBA (ppb)	TPHd (ppb)	TPHmo (ppb)
8-8A	8-8A	1/10/1989	ND < 5,000											
SBGW-7	B-7	9/30/2004	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500
SBGW-8	B-8	9/30/2004	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500
SBGW-9	B-9	9/30/2004	ND < 50	ND < 0.5	1.5	4.2	2.1	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500
SBGW-10	B-10	9/30/2004	3,600	57	720	980	200	53	ND < 0.5	11	ND < 0.5	ND < 5.0	180	ND < 500
SBGW-11	B-11	9/30/2004	1,300	6.2	150	422	140	250	ND < 0.5	30	ND < 0.5	ND < 5.0		
SBGW-12	B-12	9/30/2004	100	1.3	ND < 0.5	2.5	0.6	130	ND < 0.5	7.3	ND < 0.5	ND < 5.0	78	ND < 500
SBGW-13	B-13	9/30/2004	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	13	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	61	ND < 500
SBGW-14	B-14	9/30/2004	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500
SBGW-15	B-15	9/30/2004	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	5.4	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500

#### Notes:

TPHg: Total petroleum hydrocarbons as gasoline

MTBE: Methyl tertiary butyl ether TAME: Tertiary amyl methyl ether

DIPE: Diisopropyl ether

TPHmo: Total petroleum hydrocarbons as motor oil

TPHd: Total petroleum hydrocarbons as diesel

ETBE: Ethyl tertiary butyl ether

TBA: Tertiary butanol

ppb: parts per billion =  $\mu$ g/L = 0.001 mg/L = 0.001 ppm.

ND: Not detected at or above the method detection limit as shown.

# **Table 4 Domestic Well Groundwater Analytical Results**

Sample ID	Dom	estic Well	Sample ID	Dome	stic Well
Sample Date	1/1	7/2003	Sample Date	1/17	7/2003
ANALYTE	R/L	Results/ppb	ANALYTE	R/L	Results/ppb
Methanol	5.0	ND	TPHg	50	ND
TPHmo	500	ND	TPHd	50	ND
Dichlorodiflouromethane	0.5	ND	Dibromochloromethane	0.5	ND
Chloromethane	0.5	ND	1,2-Dibromoethane	0.5	ND
Vinyl chloride	0.5	ND	Chlorobenzene	0.5	ND
Bromomethane	0.5	ND	1,1,1,2-Tetrachloroethane	0.5	ND
Chloroethane	0.5	ND	Ethylbenzene	0.5	ND
Trichlorofluoromethane	0.5	ND	m,p-Xylene	0.5	ND
Acetone	5.0	ND	o-Xylene	0.5	ND
1,1-Dichloroethene	0.5	ND	Styrene	0.5	ND
Iodomethane	0.5	ND	Bromoform	0.5	ND
Methylene chloride	5.0	ND	Isopropylbenzene	0.5	ND
Carbon disulfide	0.5	ND	Bromobenzene	0.5	ND
trans-1,2-Dichloroethene	0.5	ND	1,1,2,2-Tetrachloroethane	0.5	ND
1,1-Dichloroethane	0.5	ND	1,2,3-Trichloropropane	0.5	ND
2-Butanone	5.0	ND	n-Propylbenzene	0.5	ND
2,2-Dichloropropane	0.5	ND	2-Chlorotoluene	0.5	ND
cis-1,2-Dichloroethene	0.5	ND	4-Chlorotoluene	0.5	ND
Bromochloromethane	0.5	ND	1,3,5-Trimethylbenzene	0.5	ND
Chloroform	0.5	ND	tert-Butylbenzene	0.5	ND
1,1,1-Trichloroethane	0.5	ND	1,2,4-Trimethylbenzene	0.5	ND
Carbon tetrachloride	0.5	ND	sec-Butylbenzene	0.5	ND
1,1-Dichloropropene	0.5	ND	1,3-Dichlorobenzene	0.5	ND
Benzene	0.5	ND	4-Isopropyltoluene	0.5	ND
1,2-Dichloroethane	0.5	ND	1,4-Dichlorobenzene	0.5	ND
Trichloroethene	0.5	ND	1,2-Dichlorobenzene	0.5	ND
1,2-Dichloropropane	0.5	ND	n-Butylbenzene	0.5	ND
Dibromomethane	0.5	ND	1,2-Dibromo-3-chloropropane	0.5	ND
Bromodichloromethane	0.5	ND	1,2,4-Trichlorobenzene	0.5	ND
cis-1,3-Dichloropropene	0.5	ND	Hexachlorobutadiene	0.5	ND
4-Methyl-2-pentanone	5.0	ND	Naphthalene	0.5	ND
Toluene	0.5	ND	1,2,3-Trichlorobenzene	0.5	ND
trans-1,3-Dichloropropene	0.5	ND	Ethanol	13	ND
1,1,2-Trichloroethane	0.5	ND	tert-Butanol	5.0	ND
Tetrachloroethene	0.5	ND	MTBE	0.5	ND
1,3-Dichloropropane	0.5	ND	Diisopropyl ether	0.5	ND
2-Hexanone	5.0	ND	Tethyl tert-butyl ether	0.5	ND
1,2-Dibromoethane	0.5	ND	tert-Amyl methyl ether	0.5	ND

# **Table 5 Groundwater Analytical Results from Monitoring Wells**

Northcrest 76 1500 Northcrest Drive Crescent City, California 95531

Sample Location	Annual Event	Sample Date	TPHg (ppb)	Benzene (ppb)	Toluene (ppb)	Xylenes (ppb)	Ethylbenzene (ppb)	MTBE (ppb)	DIPE (ppb)	TAME (ppb)	ETBE (ppb)	TBA (ppb)	TPHd (ppb)	TPHmo (ppb)
MW-1	Second Quarter	5/18/2006	ND < 50.0	0.6	ND < 0.5	ND < 1.0	ND < 0.5	7.4	ND < 0.5	2.5	ND < 0.5	ND < 50.0	ND < 50	ND < 50
MW-2	Second Quarter	5/18/2006	ND < 50.0	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 1.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50.0	ND < 50	ND < 50
MW-3	Second Quarter	5/18/2006	22,200	14.2	1,420	2,350	611	ND < 20.0	ND < 10.0	ND < 10.0	ND < 10.0	ND < 1,000	ND < 50	ND < 50
MW-4	Second Quarter	5/18/2006	ND < 50.0	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	3.7	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50.0	3,530	ND < 50
MW-5	Second Quarter	5/18/2006	88.1	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	64.6	ND < 0.5	4.2	ND < 0.5	60.0	ND < 50	ND < 50
MW-6	Second Quarter	5/18/2006	ND < 50.0	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	1.4	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50.0	ND < 50	ND < 50
MW-7	Second Quarter	5/18/2006	ND < 50.0	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 1.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50.0	ND < 50	ND < 50
MW-8	Second Quarter	5/18/2006	ND < 50.0	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 1.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50.0	ND < 50	ND < 50

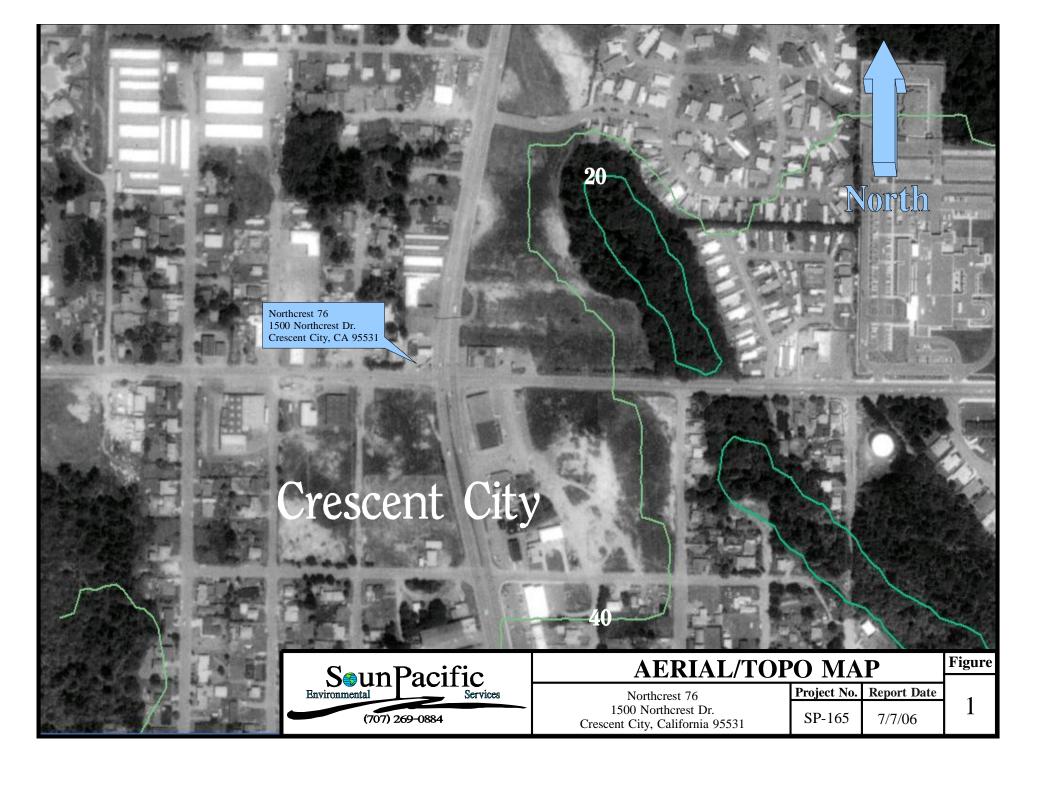
#### Notes:

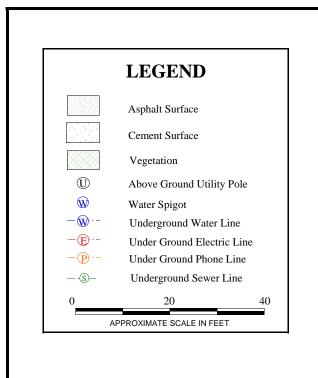
TPHg: Total petroleum hydrocarbons as gasoline TBA: Tertiary butanol

MTBE: Methyl tertiary butyl ether TPHd: Total petroleum hydrocarbons as diesel DIPE: Diisopropyl ether TPHmo: Total Petroleum hydrocarbons as motor oil TAME: Tertiary amyl methyl ether ppb: parts per billion =  $\mu$ g/l = 1,000 mg/l = 0.001 ppm.

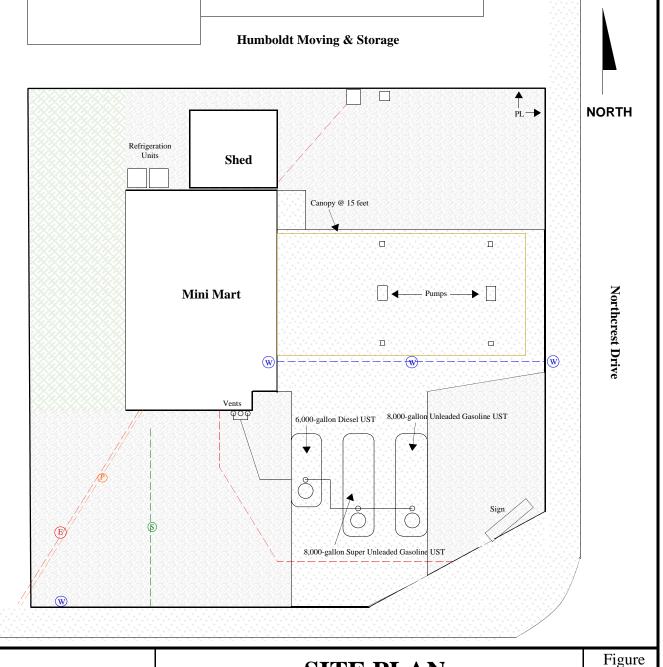
ETBE: Ethyl tertiary butyl ether ND: Not detected at or above the method detection limit as shown.

# **Figures**





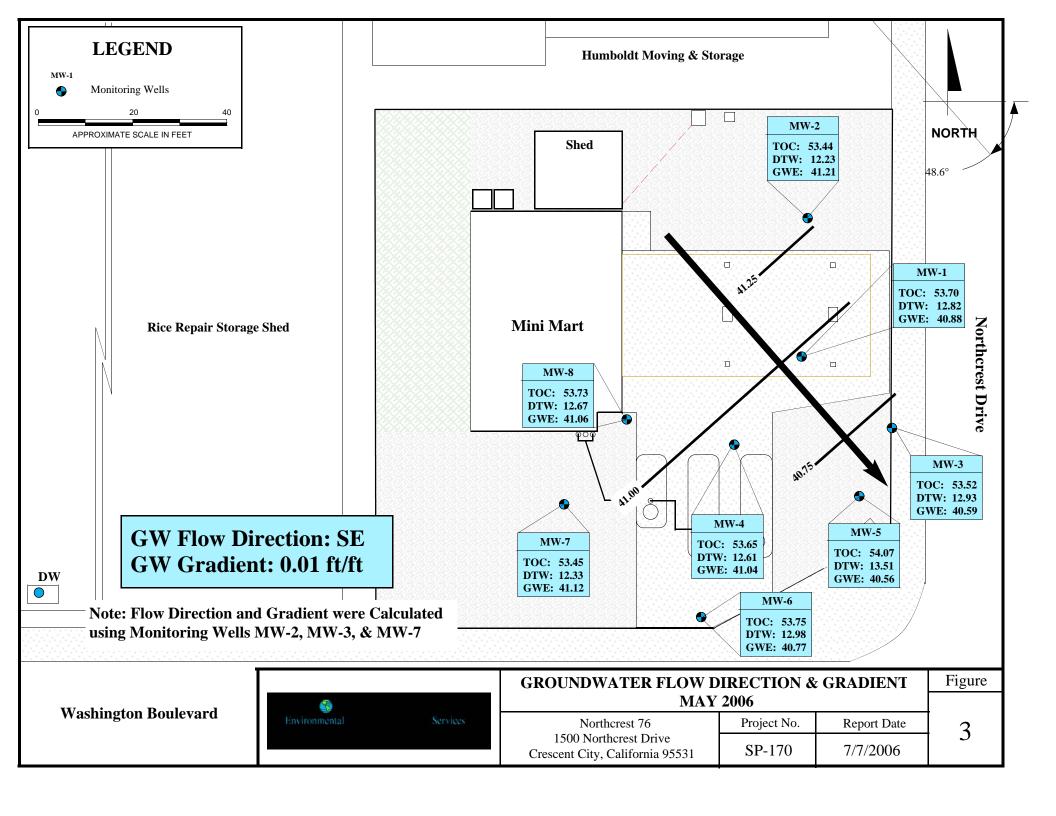
**Rice Repair Storage Shed** 

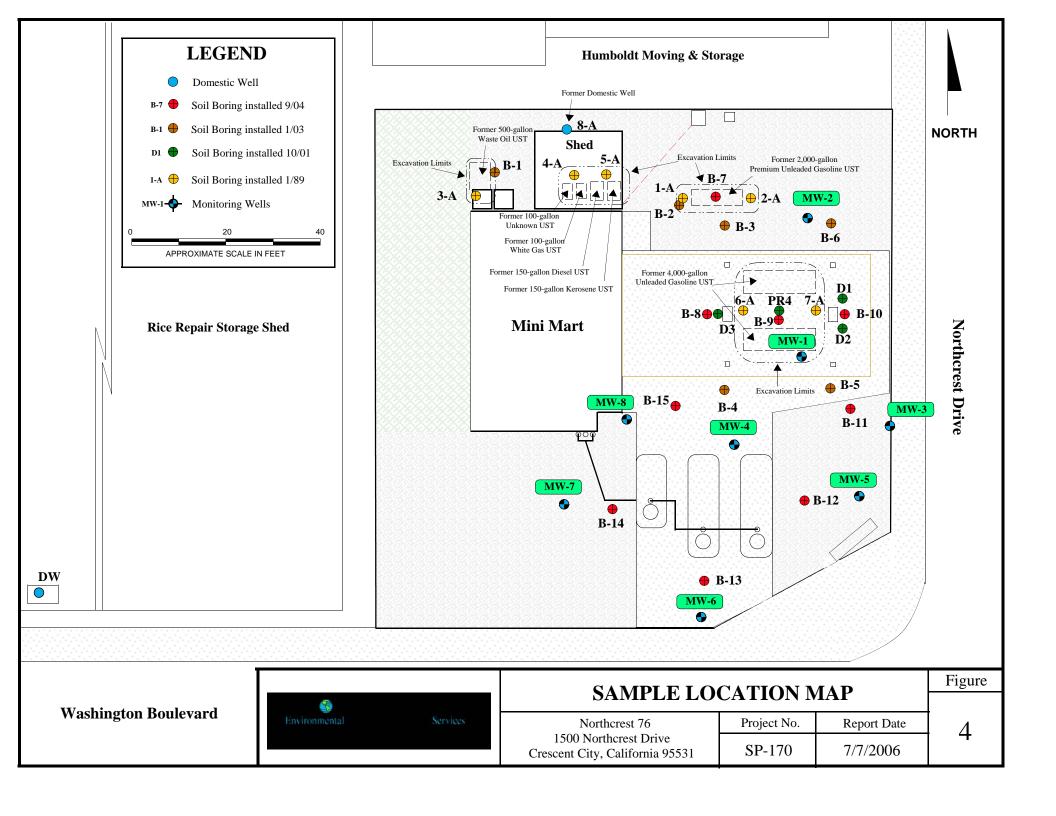


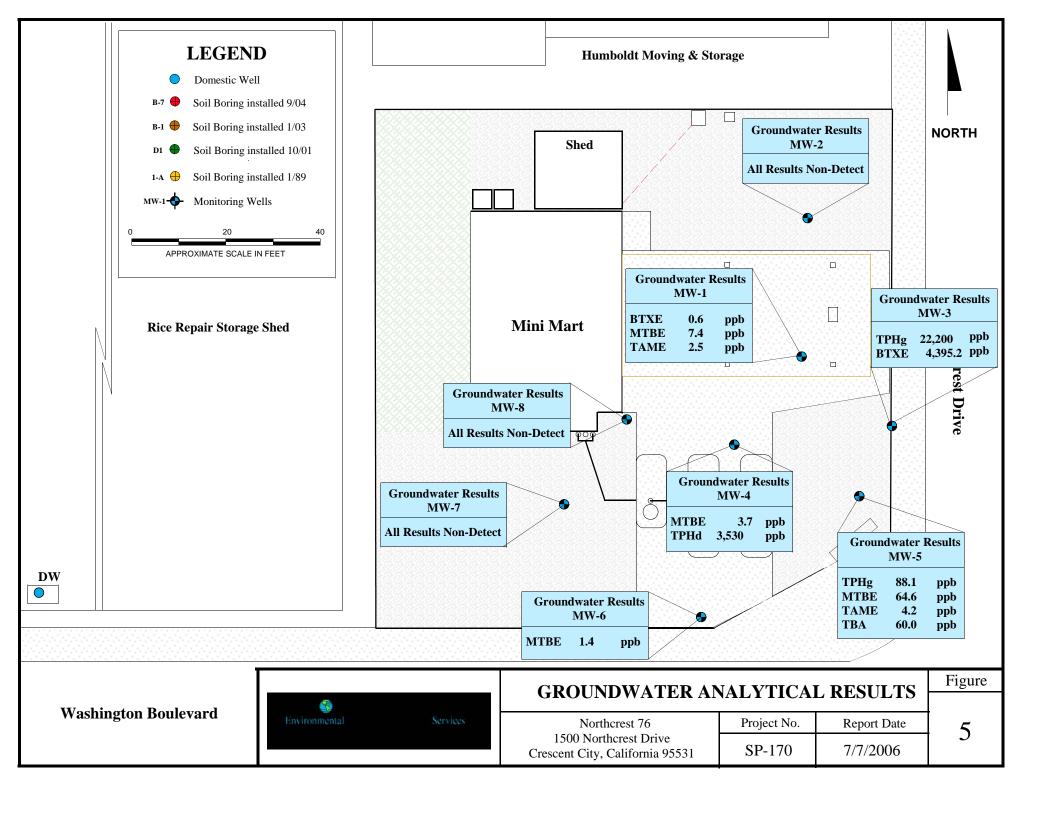
**Washington Boulevard** 



SITE	PI AN		Figu
SILE	LAN		
Northcrest 76	Project No.	Report Date	$\overline{}$
1500 Northcrest Drive Crescent City, California 95531	SP-170	7/7/2006	

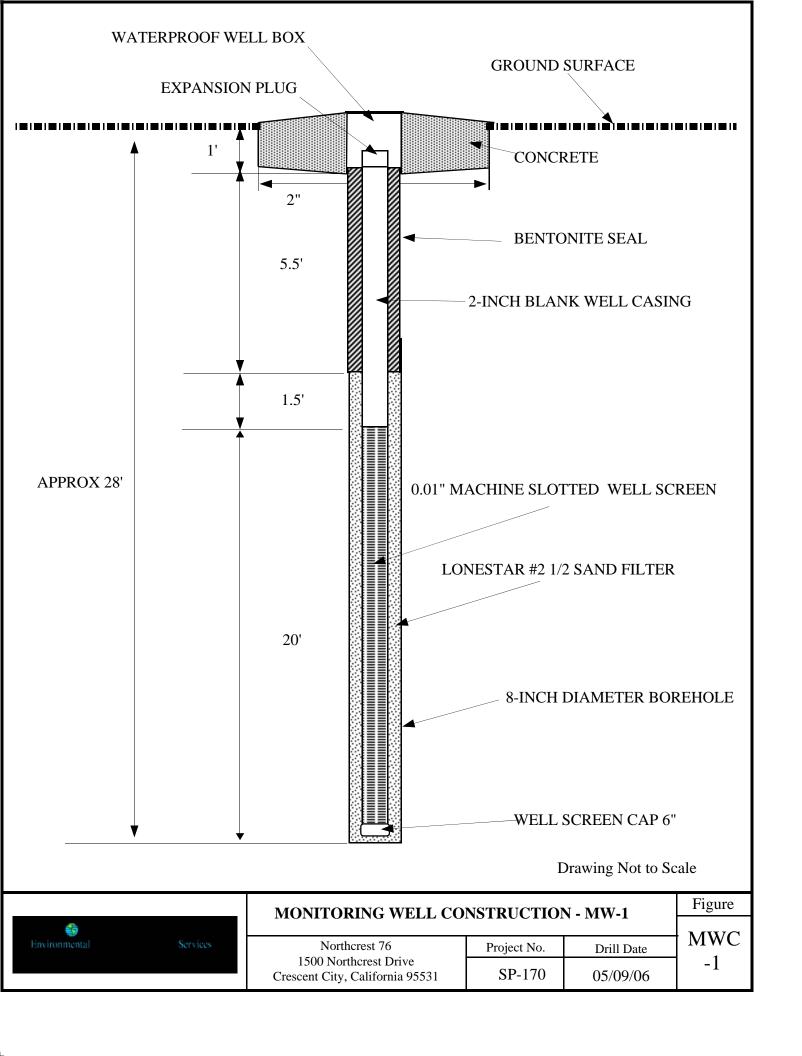


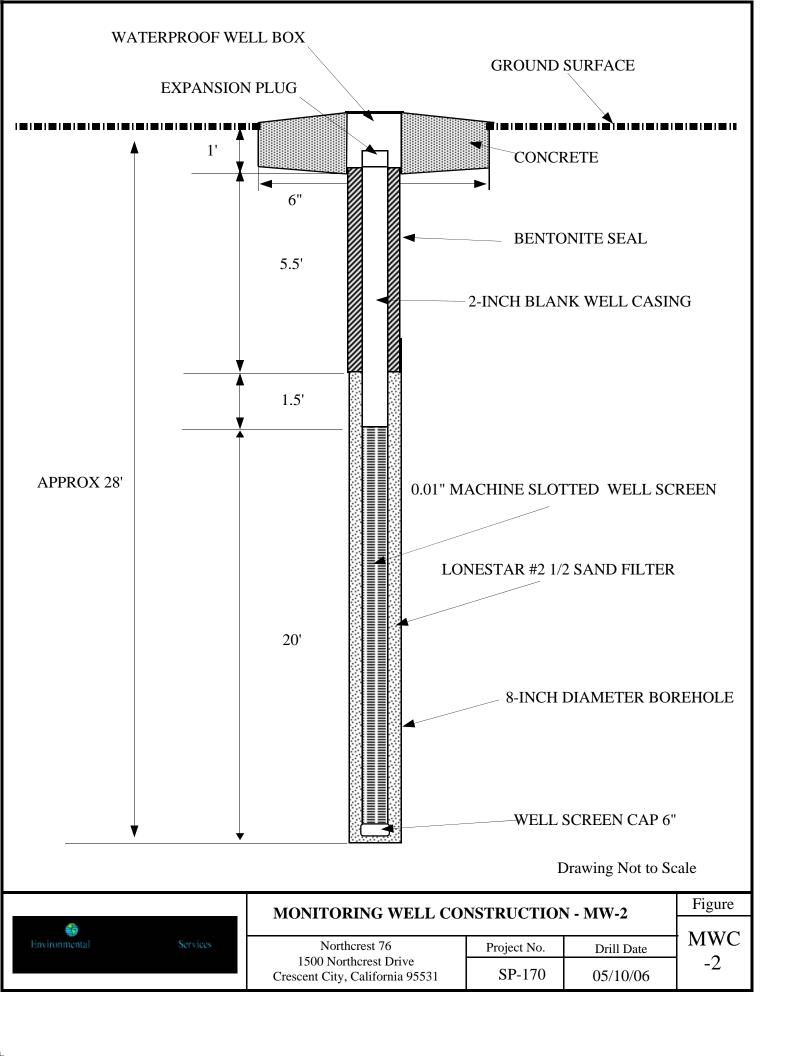


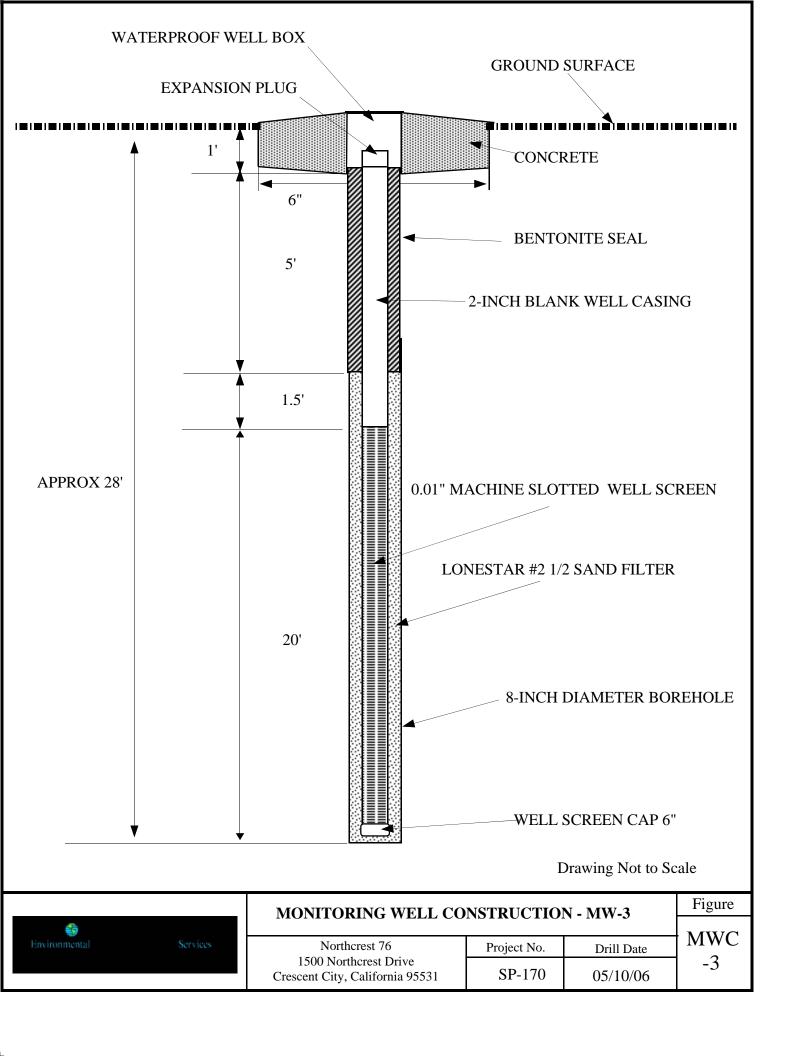


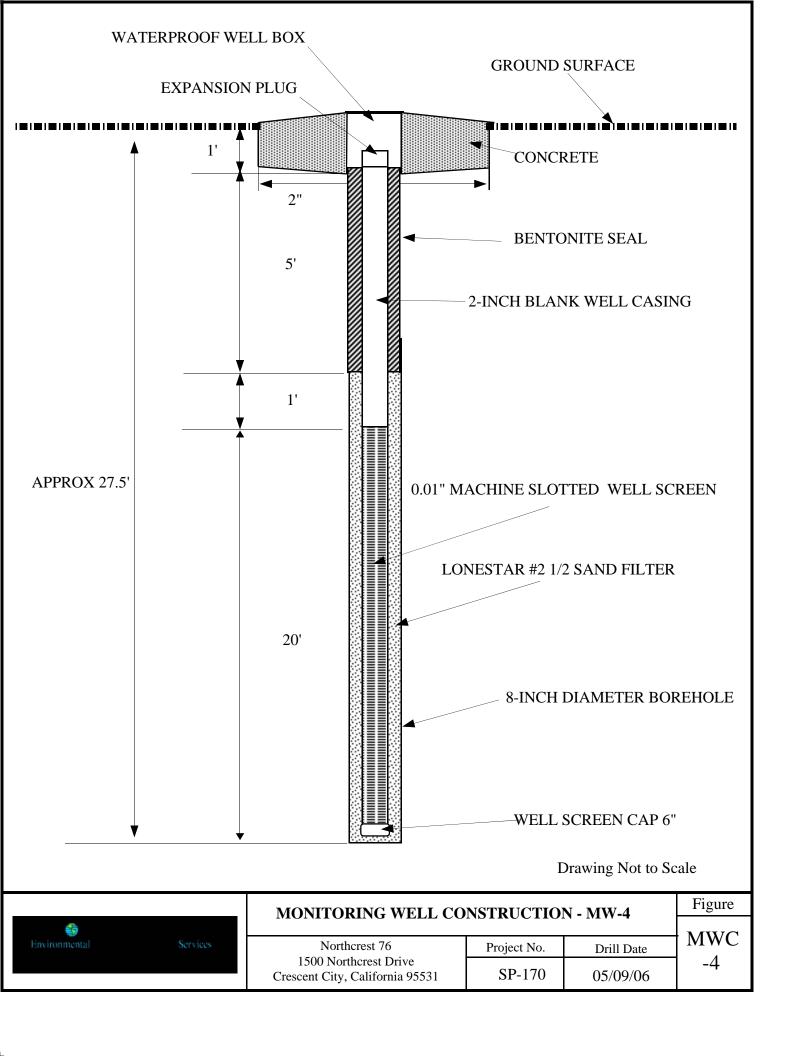
### **Appendices**

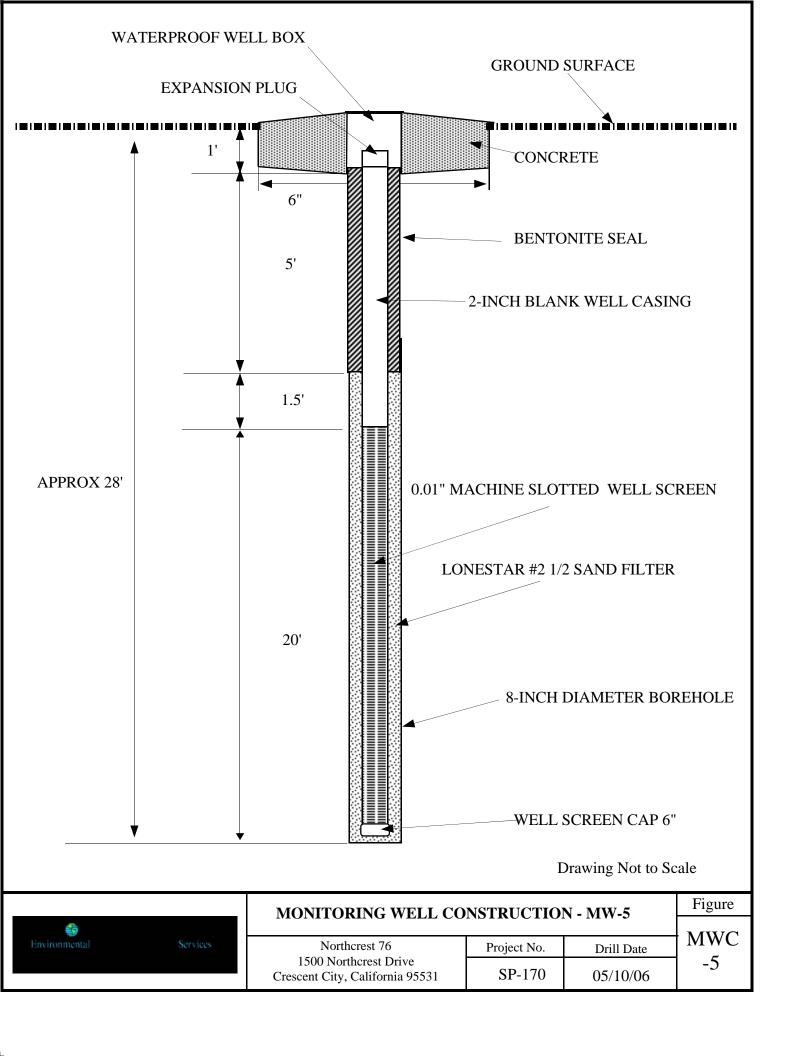
# Appendix A

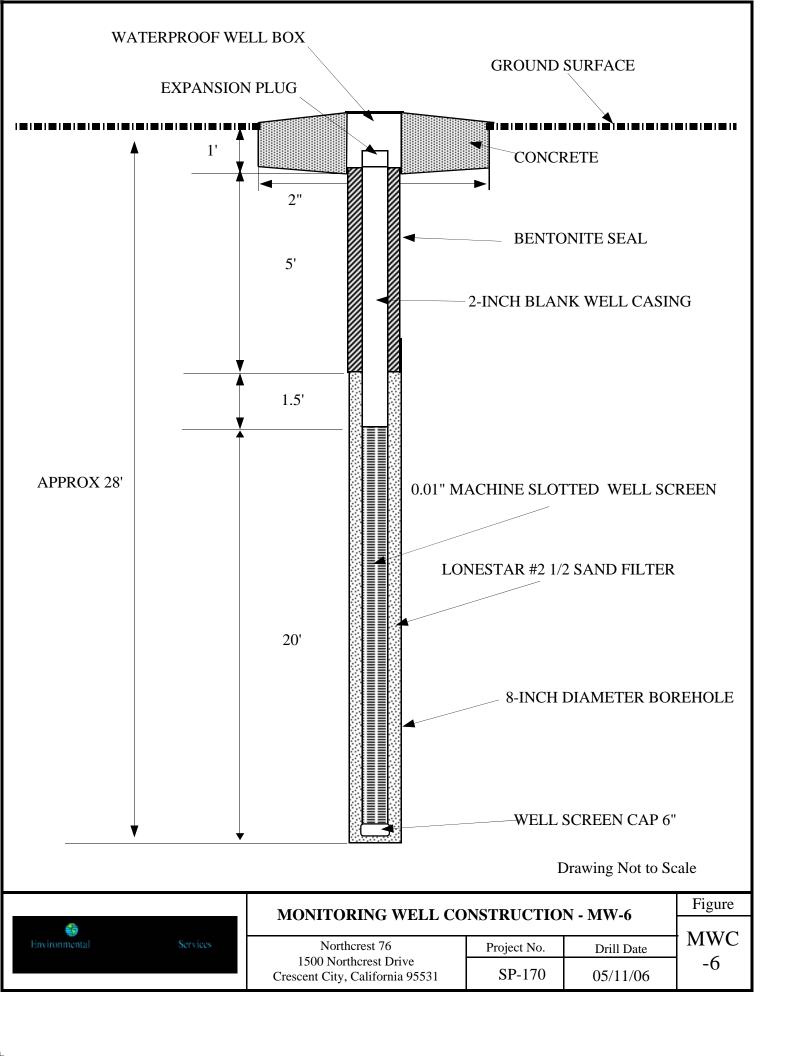


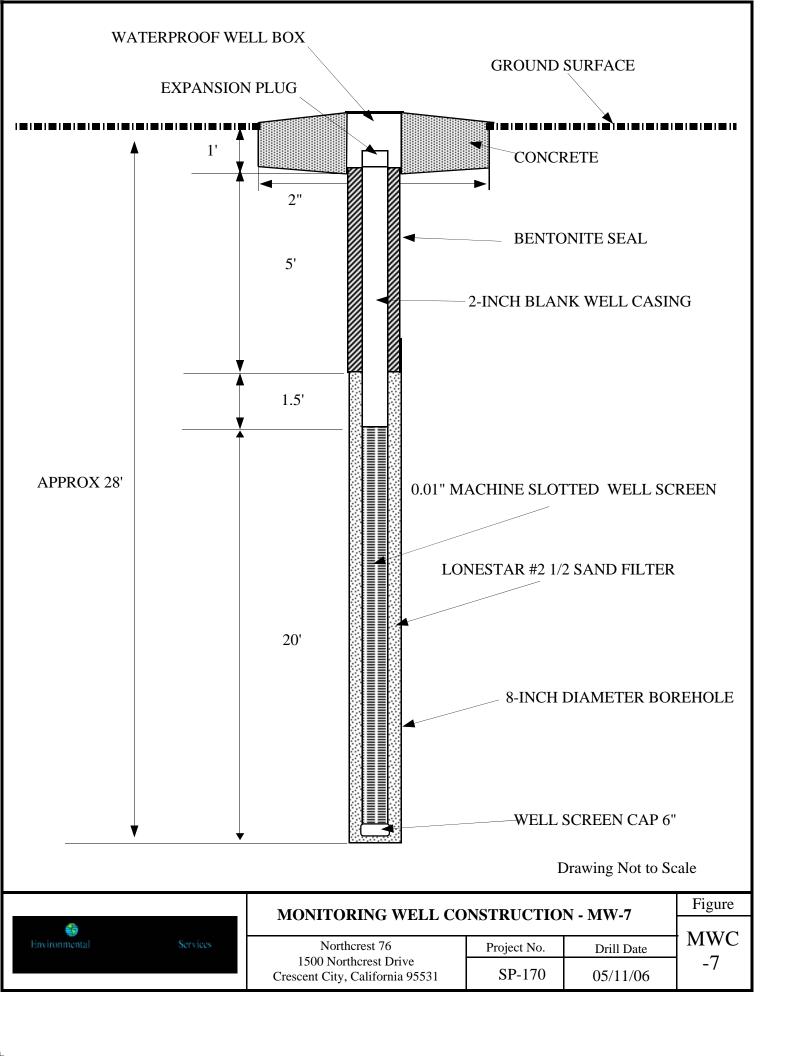


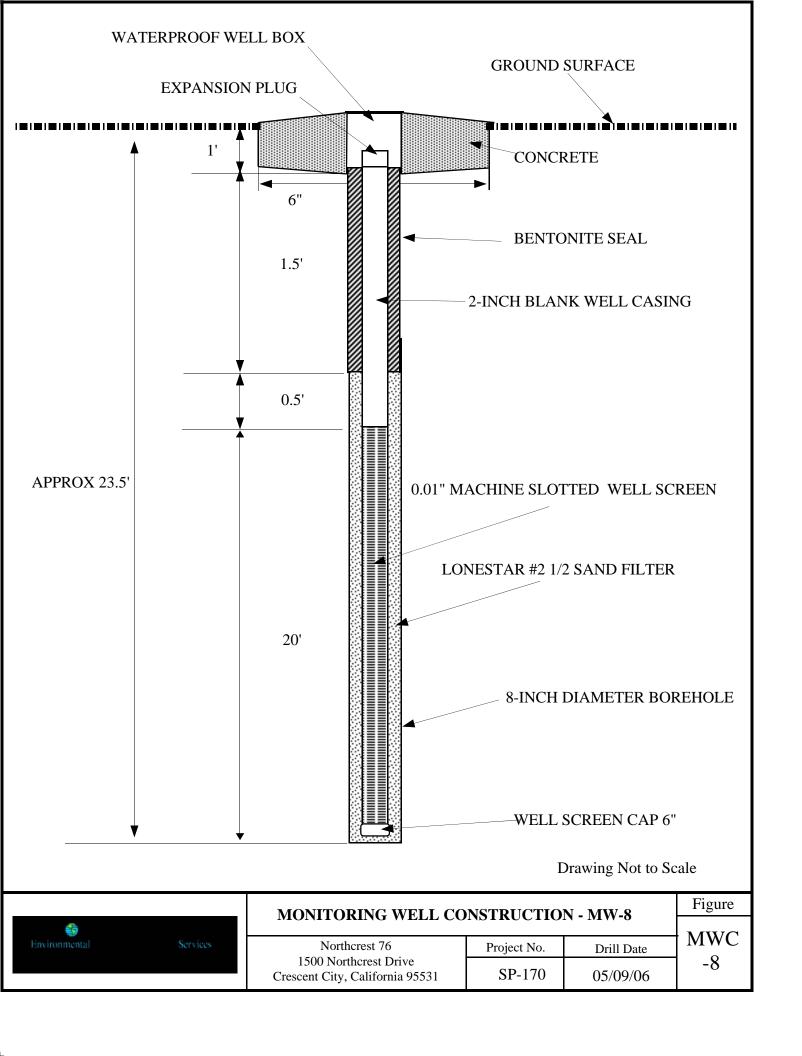






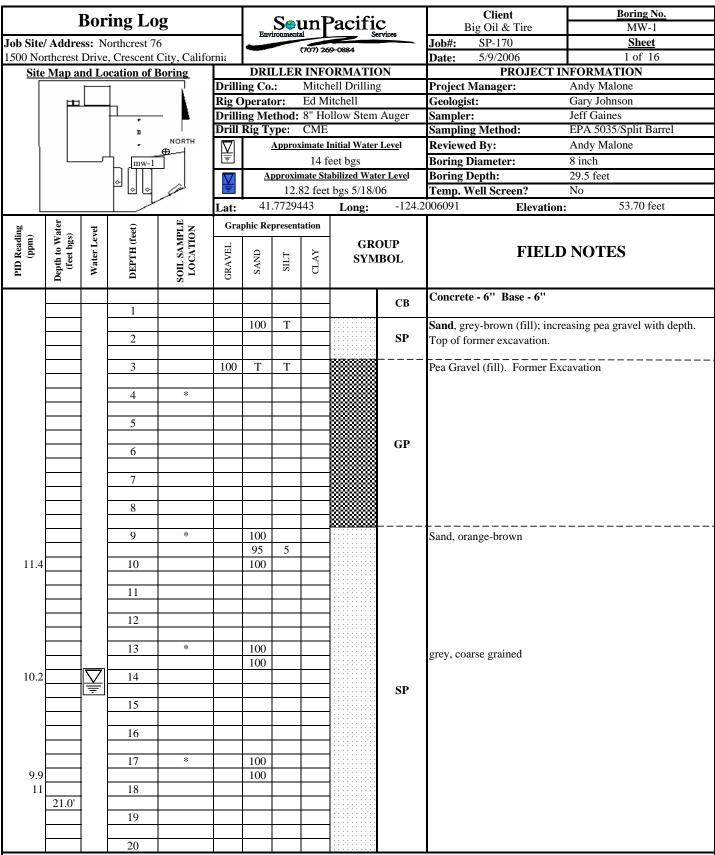




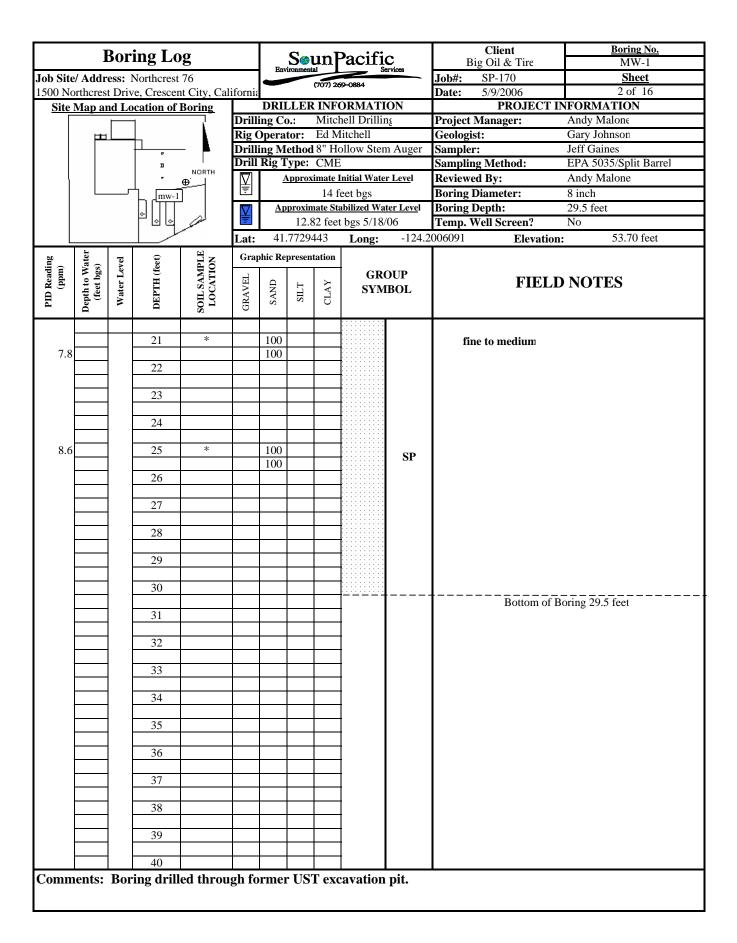


### **Legend for Boring Logs**

A, B, C AB CB	Asphalt, Base, Concrete Asphalt/B ase Concrete/ Base
F F	Fill, undifferentiated
GP or GW	Gravel, poorly sorted (GP), well sorted (GW)
GM or GC	Silty Gravel (GM), Clayey gravel (GC)
SP or SW	Sand, poorly sorted (SP), well sorted (SW)
SM or SC	Silty Sand (SM), Clayey Sand (SC)
ML or MH	Inorganic Silt or Very Fine Sand (ML), Elastic Silt (MH)
CL or CH	Inorganic Clay, low plasticity (CL), Inorganic Clay, high plasticity (C
L, OH, or F	Organic Clay, low plasticity (OL), Organic Clay, high plasticity (OH), Peat (PT)
	Gradational Contact
	Abrupt or Sharp Contact
	Initial Water Level
\times_\equiv \equiv \	Stabilized Water Level
F	F after symbol indicates that the material appears to be fill SP-F

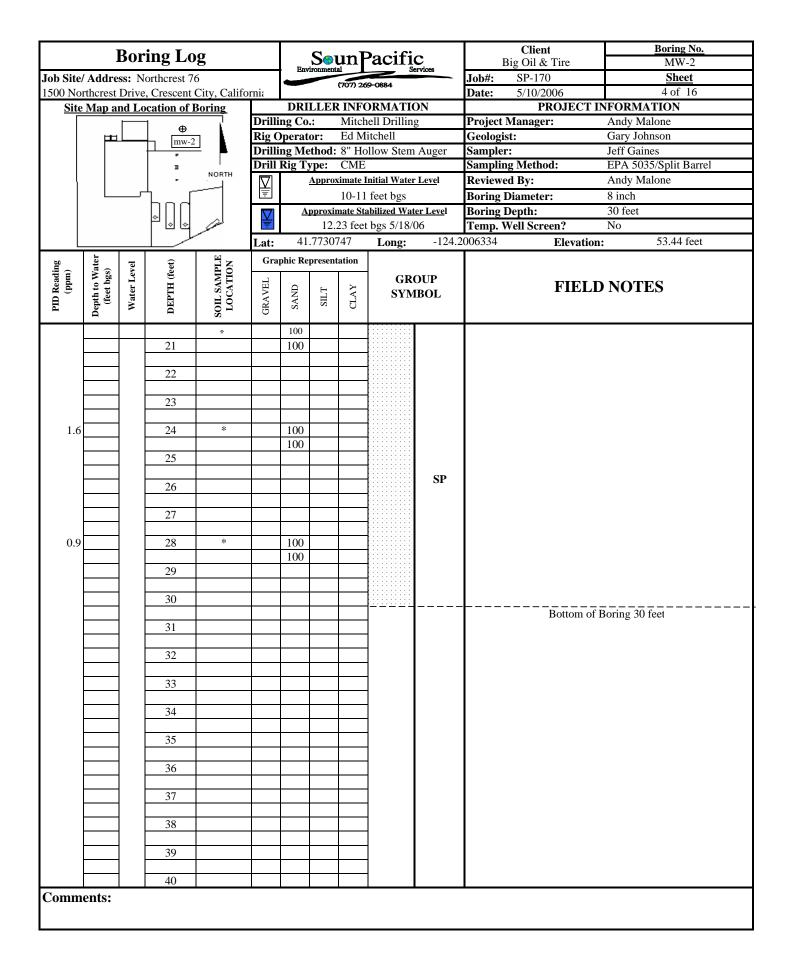


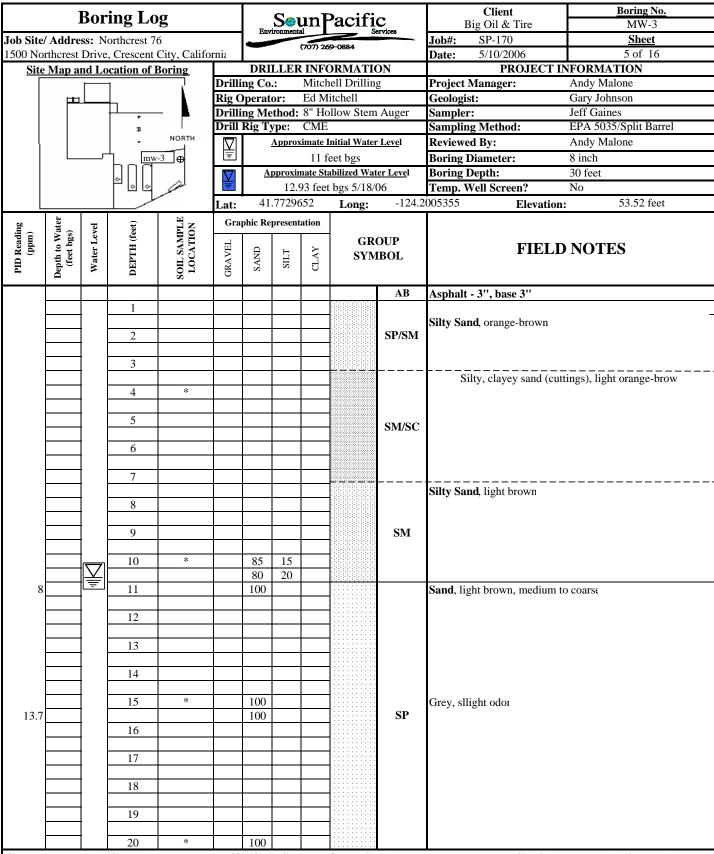
Comments: Top 3.5' hand augered on 4/28/06. Sample from 4' collected. Re-auger to 4' with post-hole digger (larger diameter) prior to drilling.



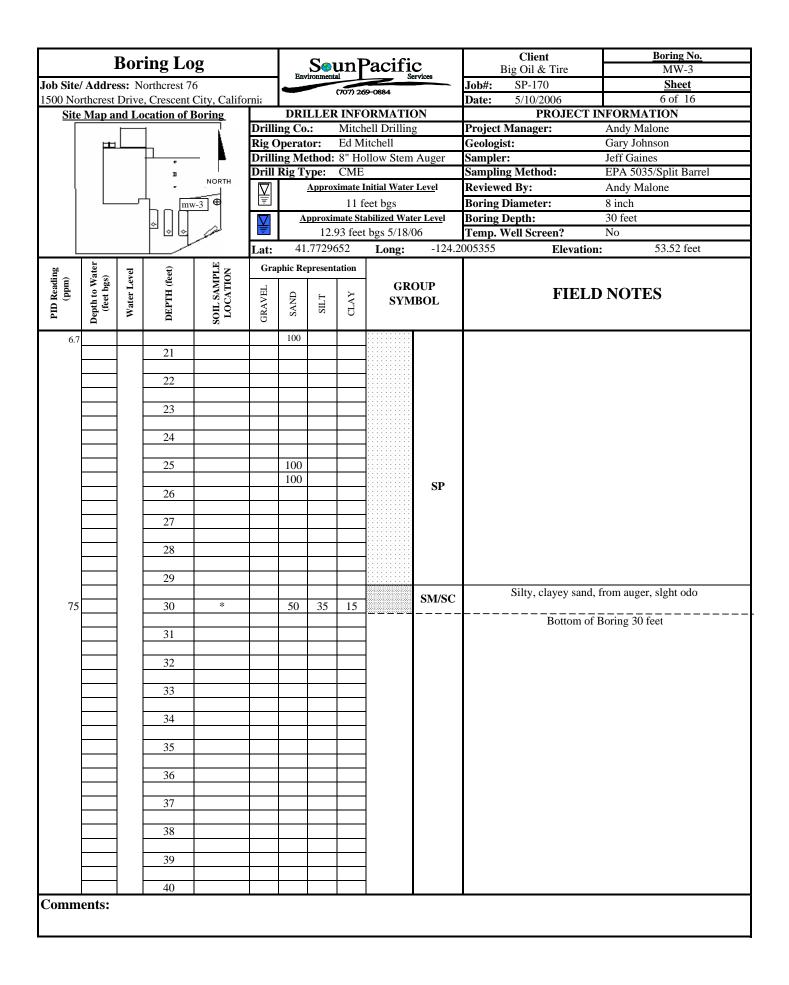
		Ror	ing Lo	σ			Car	ınI	Pacifi		Client	Boring No.		
						Env	ironmenta		Pacifi	ervices	Big Oil & Tire	MW-2		
			orthcrest 7			-		(707) 26	9-0884		<b>Job#:</b> SP-170	Sheet		
				City, Califo	rnia	DDI		TNIE	D	ONI	<b>Date:</b> 5/10/2006	3 of 16		
Site	e Map a	nd Lo	cation of l	Boring	D :111:				DRMATIC			C INFORMATION		
			1 ⊕_	l l		ng Co			ell Drillin	g	Project Manager: Andy Malone			
	<u> </u>	1	mw-	-2		perat			itchell	A	Geologist:	Gary Johnson		
			-			ng Me Rig T		CME	llow Stem	Auger	Sampler: Sampling Method:	Jeff Gaines		
			_ n	NORTH								EPA 5035/Split Barrel		
ΙÌ		_	Ĺ ´ _		\\ \\ \\ \\ \\				nitial Water	<u>r Leve</u> l	Reviewed By:	Andy Malone		
			had		=				feet bgs		Boring Diameter:	8 inch		
				لم	$\frac{\nabla}{=}$	<u>A</u>			abilized Wat		Boring Depth:	30 feet		
				- Service Control	=	41			bgs 5/18/		Temp. Well Screen?	No 52.44 S		
l	T	1			Lat:		.77307		Long:	-124.	2006334 Elevati	on: 53.44 feet		
PID Reading (ppm)	Depth to Water (feet bgs)	Water Level	DEPTH (feet)	SOIL SAMPLE LOCATION	Graphic Representation									
Readin (ppm)	t bg	rLe	H (f	ATI	田			>-		OUP	FIEL	LD NOTES		
	(fee	/ate	PT	IL S OC.	GRAVEL	SAND	SILT	CLAY	SYM	IBOL		DICIES		
<u>-</u>	Del	=	ā	SOS	GR	S	01	0						
		1								AB	Asphalt - 3", Base 3"			
		1	1								Silty sand, orange-brown			
		1								SM	, , , , , , , , , , , , , , , , , , , ,			
			2							SIVI				
			3								Sand with minor silt, light	orange-brow		
		4	4	*						SP				
		-												
		-	5											
		-	6								Silty sand with minor clay	light brown		
			0								Shty sand with initiol clay	, light blowl		
			7											
			8	*		60	30	10		SM				
0.6	5													
			9											
		4	10											
	-		10		1					<b> </b>				
		╫¥╢	11								Sand, grey-brown, mediur	n to coarse, mois		
		╢	11		1									
		1	12	*		100								
1.6	5	1	12			100								
1.0		1	13			100								
		]												
			14											
		]												
		1	15							SP				
	-	4	1.0	ala.	1	100								
1 (		1	16	*		100								
1.8	` <del> </del>	1	17			100								
		1	1/			100								
		1	18											
		1	10		1									
		1	19											
		]												
			20	*		100								

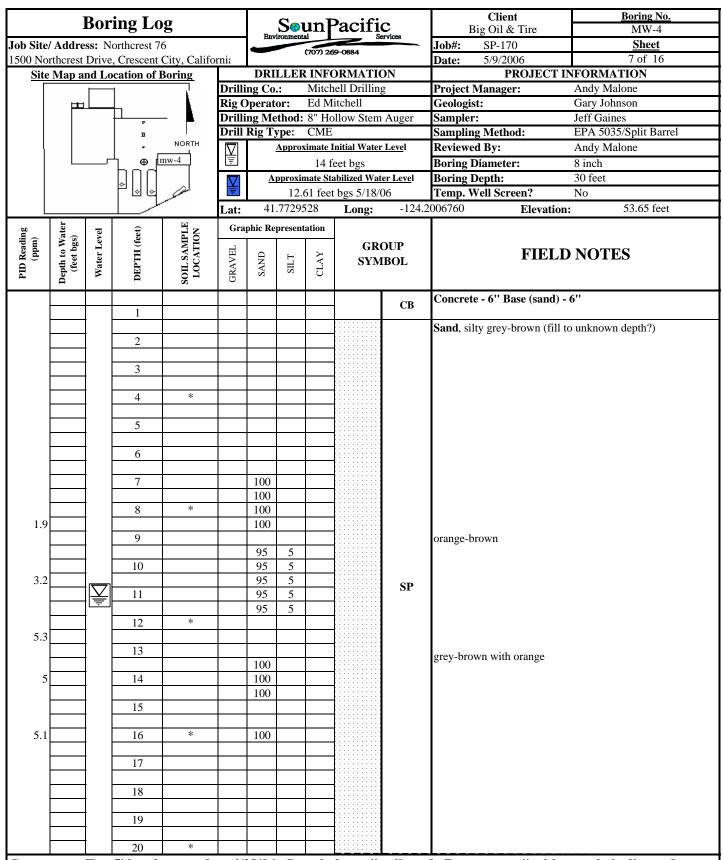
Comments: Top 4' hand augered on 4/26/06. Sample from 4' collected. Re-auger to 4' with post-hole digger (larger diameter) prior to drilling.



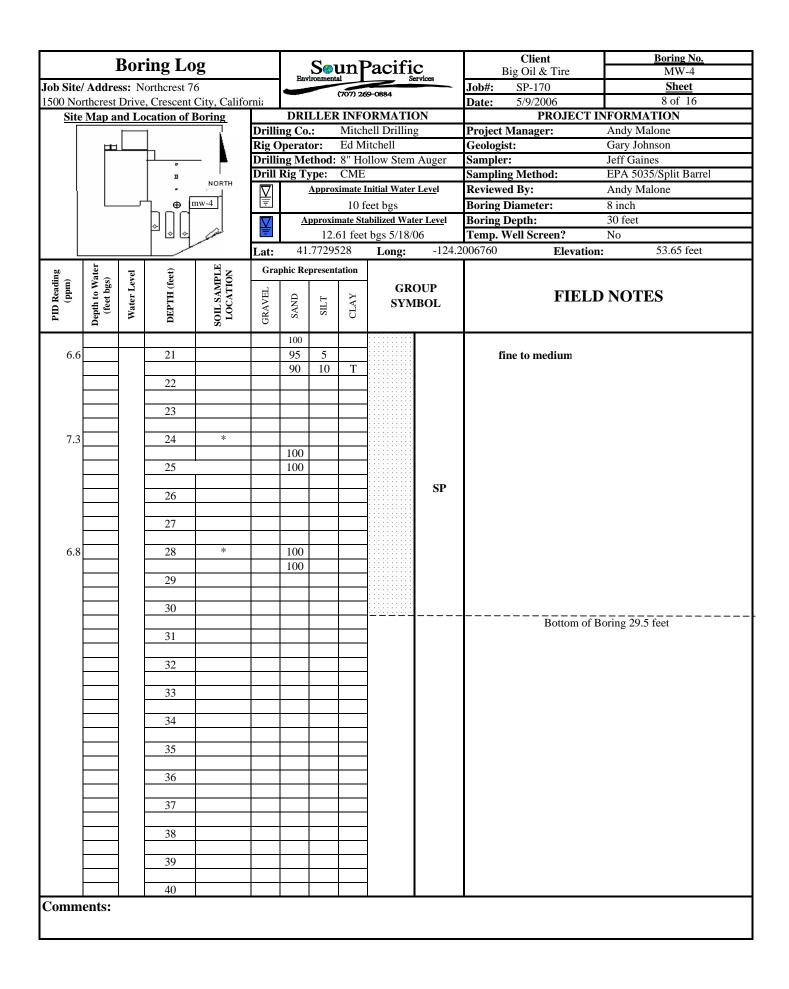


Comments: Top 4' hand augered on 4/26/06. Sample from 4' collected. Re-auger to 4' with post-hole digger (larger diameter) prior to drilling. Overhead prevents use of mast.





Comments: Top 5' hand augered on 4/28/06. Sample from 4' collected. Re-auger to 4' with post- hole digger (larger diameter) prior to drilling.



		Bor	ing Lo	g			Set	unF	aci	ifi	c <sub>.</sub>	Client Big Oil & Tire	Boring No. MW-5
Job Site	/ Addre	ess: N	orthcrest 7	6		Env	ironment		_	Se	ervices	<b>Job#:</b> SP-170	Sheet
				City, Califo	rnia			(707) 26				<b>Date:</b> 5/10/2006	9 of 16
Site	Мар а	nd Lo	cation of l	Boring			LLER					PROJEC	CT INFORMATION
Γ			1			ng Co			ell Dri		g	Project Manager:	Andy Malone
	<b>#</b>		$\vdash$	<b>.</b>		)perat			itchell			Geologist:	Gary Johnson
			<del>                                     </del>	- 🖡					llow S	Stem	Auger	Sampler:	Jeff Gaines
			_ n	I NORTH		Rig T		CME				Sampling Method:	EPA 5035/Split Barrel
1		_	ļ ·_				Approx		eet bgs			Reviewed By:	Andy Malone
			$h \cap A^{m}$	w-5								Boring Diameter:	8 inch
				<b>⊕</b>	$rac{1}{\sqrt{2}}$	<u>A</u>						Boring Depth:	30 feet
			1 " "	and the same of th	$\vdash$	41			bgs 5/			Temp. Well Screen?	No 54 07 foot
	Τ.	1			Lat:		.77289		Lon	g:	-124.2	2005478 Eleva	<b>tion:</b> 54.07 feet
ing (	ater	vel	set)	PLE N	Gra	phic Re	present	ation					
ead	o W	r Le	H (fe	AM	EL		_	,		GRO	OUP	FIE	LD NOTES
PID Reading (ppm)	feet	Water Level	DEPTH (feet)	L S DCA	GRAVEL	SAND	SILT	CLAY	S	SYM	BOL	LIE	
P	Depth to Water (feet bgs)	*	DE	SOIL SAMPLE LOCATION	G.	S <sub>2</sub>	S	Ü					
					1							Asphalt - 5-6", Base 1'	
			1								AB	, , , , , , , , , , , , , , , , , , , ,	
			2									Silty Sand, reddish, oran	ge-brown
		1			1						SM		
			3								2112		
		4	A	*	1						<u> </u>	H	
			4	*									
		_	5										
			6								SP/SM		
											SP/SM		
			7										
0.4						0.7							
0.4		-	8	*		85 90	15						
		1	9	<u>l</u>	1	90	10 5					Sand, orange-brown	
		1	7			93	,					Sanu, orange-brown	
0.4			10	*	1	90	10						
						85	15	T				Silty	
		Ţ	11			100							
					1								
			12	-									
		-	13										
		1	13		1								
			14										
											SP		
0.2			15									No recovery, loose sand	?
			16		1								
		-	17										
		1	17		1								
			18										
	<b>—</b>	1	10		1								
								<b>.</b>		-1-1-1-1			
			19										
			19										

Comments: Top 4' hand augered on 4/26/06. Sample from 4' collected. Re-auger to 4' with post-hole digger (larger diameter) prior to drilling. Overhead prevents use of mast.

	]	Bor	ing Lo	og			S⊜ı	ınF	Pacific	<b>Client</b> Big Oil & Tire	Boring No. MW-5			
			orthcrest 7			Env	ironmenta		Services 69-0884	<b>Job#:</b> SP-170	Sheet			
				City, Califo	rnia					<b>Date:</b> 5/10/2006	10 of 16			
Sit	e Map a	nd Lo	cation of l	Boring		DRI	LLER		ORMATION		INFORMATION			
			1	l l	Drilli	ng Co	.:		hell Drilling	Project Manager: Andy Malone				
	뿌		Н			perat			litchell	Geologist: Gary Johnson				
			-				ype:		ollow Stem Auger	Sampler: Sampling Method:	Jeff Gaines EPA 5035/Split Barrel			
				NORTH					Initial Water Level	Reviewed By:	Andy Malone			
1 )		_	<u>ل</u> آ		\\ \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		Approx		feet bgs	Boring Diameter:	8 inch			
			հոգ	nw-5		A	nnroxin		tabilized Water Level	Boring Depth:	30 feet			
				<b>9</b> ]	¥				et bgs 5/18/06	Temp. Well Screen?	No			
			レフ		Lat:	41	.77289			005478 Elevati				
<u> </u>	i.			泊		phic Representation			Long.	Lievan	<b></b>			
ding (a	vate ₹S	evel	feet	IPL ION	-				an arm					
PID Reading (ppm)	Depth to Water (feet bgs)	Water Level	DEPTH (feet)	SOIL SAMPLE LOCATION	GRAVEL	SILT		CLAY	GROUP SYMBOL	FIELD NOTES				
			21											
			22											
			22											
			23											
			24											
			25							No recovery, loose sand?				
									SP	110100	, erj, 1000e band.			
		•	26											
			27											
		† †	28											
			29											
			30											
			31							Bottom o	of Boring 30 feet			
			32						]					
			33						_					
			34						_					
			35						-					
			36											
			37						1					
									]					
			38						1					
			39						_					
			40											
Comn	nents:													

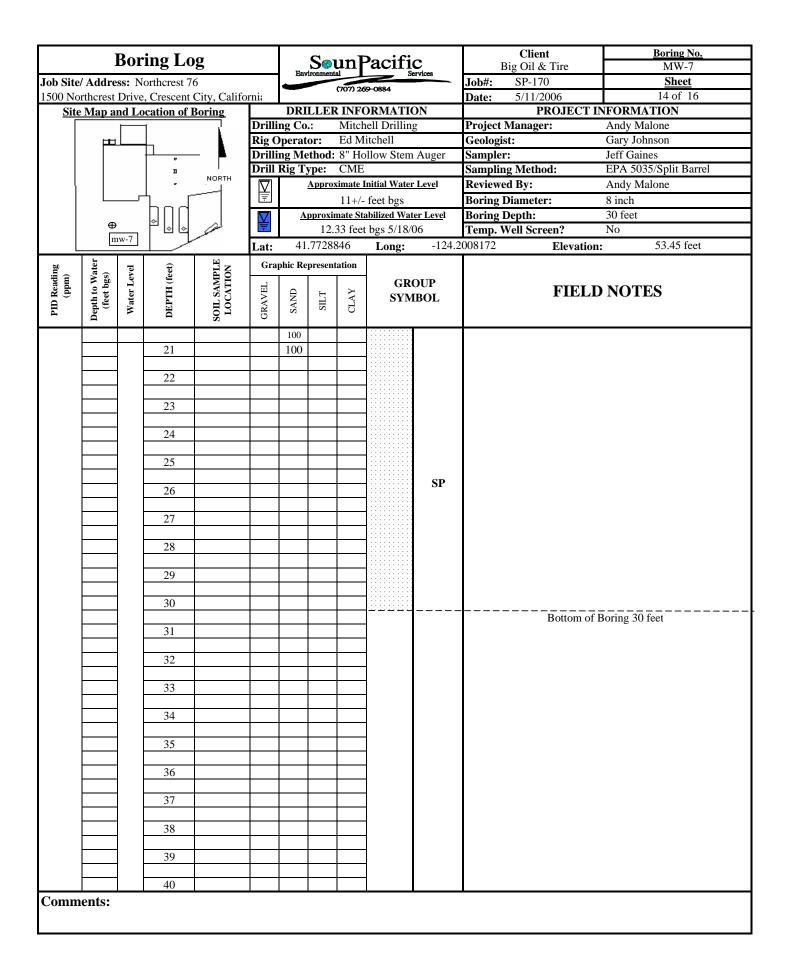
		Ror	ing Lo	ισ			Sat	ınI	Pacifi		Client	Boring No.		
				_		Env	rironments		aciii	ervices	Big Oil & Tire	MW-6		
			orthcrest 7			-		(707) 26	9-0884		<b>Job#:</b> SP-170	Sheet		
				City, Califo	rnia						<b>Date:</b> 5/9/2006 11 of 16			
Sit	e Map a	nd Lo	ocation of l	<u>Boring</u>					DRMATI		PROJECT INFORMATION			
			1	l l		ng Co			ell Drillin	g	Project Manager:	Andy Malone		
	<b>#</b>		<b>-</b>	l l		)perat			itchell		Geologist:	Gary Johnson		
			-	- ₽					llow Sten	n Auger	Sampler:	Jeff Gaines		
			п п	ı	Drill			CME			Sampling Method:	EPA 5035/Split Barrel		
1 1			-	NORTH	\\ \\ \\ \\ \\		Approx	imate l	nitial Wate	r Level	Reviewed By:	Andy Malone		
			┧ſ		₹			11 +/-	feet bgs		<b>Boring Diameter:</b>	8 inch		
					$\overline{\underline{race}}$	A	pproxir	nate St	abilized Wa	ter Level	Boring Depth:	30 feet		
				Land .	=		12.9	98 feet	bgs 5/18/	06	Temp. Well Screen?	No		
		mw-	سلر⊕ لب		Lat:	41	.77283	323	Long:	-124.	2006820 <b>Elevati</b>	on: 53.75 feet		
-	er			Ħ.	1		present					<del></del>		
PID Reading (ppm)	Depth to Water (feet bgs)	Water Level	DEPTH (feet)	SOIL SAMPLE LOCATION		[ ·	F	 	CD	OLID				
Rea (ppi	to t	erI	Ě	SAI 'AT	GROUP SYMBOL FIFE			LD NOTES						
А	(fer	Vat	EP	μo	RA	SAND	SILT	CLAY	SIN	IBOL				
H	Ď		Q	SC	Ö	• 1								
			1							СВ	Concrete - 4-5", Base 8"			
											Silty Sand to Sandy Silt, r	reddish, orange-brown		
			2											
		_	3								Silty Sand			
		_	4	*										
			4	· ·										
			5											
		_								CM				
			6							SM				
		_	_											
			7											
		_	8											
			0											
			9											
3.0	)		10	*		80	20							
		¥	11	1	1	80 100	20				Cond modium to accord			
	-	ľ	11			100					Sand, medium to coarse, b	DIOWI		
			12											
		-	13											
		1	1 /	1	1									
		1	14		1									
3.0	)		15	*		100								
						100				SP				
		1	16			100								
			17	-										
		1	17		1									
			18											
		]		<u> </u>										
			19											
	\ <u> </u>	_	20	±		100								
6.0	<i>'</i>	<u> </u>	20	*		100				l				

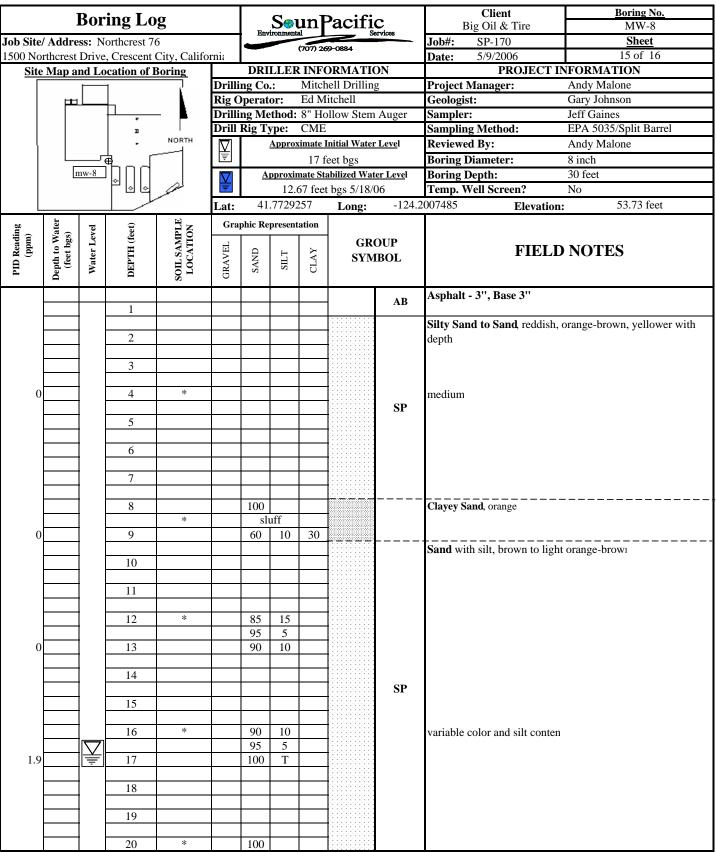
Comments: Top 4' hand augered on 4/28/06. Sample from 4' collected. Re-auger to 4' with post-hole digger (larger diameter) prior to drilling. No mast due to overhead.

	Boring Log ob Site/ Address: Northcrest 76 500 Northcrest Drive, Crescent City, California						S	un]	Pacific	<b>Client</b> Big Oil & Tire	Boring No. MW-6		
							_	(707) 20		<b>Job#:</b> SP-170	Sheet		
					rnia	DD.				<b>Date:</b> 5/11/2006	12 of 16		
Site	e Map a	nd Lo	cation of l	Boring	Drilli				ORMATION nell Drilling	PROJEC: Project Manager:	TINFORMATION Andy Malone		
	ш			Ĺ		)perat				Geologist:	Gary Johnson		
	<u> </u>		┇	_ 1						Sampler: Jeff Gaines			
			, ,			Rig T		CME		Sampling Method:	EPA 5035/Split Barrel		
ļ			-	NORTH					Initial Water Level	Reviewed By:	Andy Malone		
			ኒ <sub></sub> r		\\ \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\			11 +/-	- feet bgs	Boring Diameter:	8 inch		
					¥	A			abilized Water Level	Boring Depth:	30 feet		
		_			Ē				t bgs 5/18/06	Temp. Well Screen?	No		
		m	<u>w-6</u> ⊕		Lat:	41	.77283	323	<b>Long:</b> -124.20	006820 <b>Elevat</b>	<b>ion:</b> 53.75 feet		
ing (	/ater	vel	eet)	PLE	Gra	phic Re	present	ation					
PID Reading (ppm)	Depth to Water (feet bgs)	Water Level	DEPTH (feet)	SOIL SAMPLE LOCATION	GRAVEL	SAND	SILT	CLAY	GROUP SYMBOL	FIELD NOTES			
			21		-	-							
			22										
			22		1		ļ						
			23										
			24										
			25										
			26						SP				
			27										
			28										
			29		1								
			30										
			31							Bottom	of Boring 30 feet		
			32		1								
									]				
		-	33		-		-		<u> </u>				
		}	34										
			35						]				
			36										
			37						]				
			31		†								
			38						]				
			39										
			40						<u> </u>				
Comn	nents:												

		Bor	ing Lo				Set	ınF	Pacifi		Client Big Oil & Tire	Boring No. MW-7			
Joh Site			orthcrest 7			Env	ironment	al L		ervices	Job#: SP-170	Sheet			
				City, Calif	orni			(707) 26	9-0884		Date: 5/11/2006	13 of 16			
			ocation of		OHII	DDI	HED	INF	DRMATI	ON	PROJECT INFORMATION				
<u>510</u>	e Map a	ila Le	- Cauon or	<u>boring</u>	Deilli	ing Co			ell Drillin		Project Manager: Andy Malone				
		.		ľ		)perat			itchell	5	Geologist:	Gary Johnson			
	۳		$\Box$	_ \					llow Stem	Augor	Sampler:	Jeff Gaines			
			•			Rig T		CME	now sten	Auger	Sampling Method:	EPA 5035/Split Barrel			
				NORTH					nitial Water	Lovel	Reviewed By:	Andy Malone			
)		_	Ц ,		\\\ \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		Approx			Level		8 inch			
	_		hnd						feet bgs	tow Lovel	Boring Diameter: Boring Depth:	30 feet			
	€	€			Approximate Stabilized Water Level 12.33 feet bgs 5/18/06						Temp. Well Screen?	No			
	r	nw-7	ון "ק	- San		41	.77288		_		•				
l	1 .	1	<del>                                     </del>	_	Lat:				Long:	-124.	2008172 <b>Eleva</b>	tion: 53.43 feet			
PID Reading (ppm)	Depth to Water (feet bgs)	vel	et)	SOIL SAMPLE LOCATION	Gra	phic Re	present	ation							
eadi pm)	o W	Water Level	DEPTH (feet)	MA	딆				GR	OUP	DIE.	I D MOTEC			
D R	th t	ateı	E	LS.	₹ A	SAND	SILT	CLAY	SYN	IBOL	FIELD NOTES				
Ы	Jep (1)	×	DE		GRAVEL	SA	S	C							
				32						AB	Asphalt - 1-2", Base 3-4	"			
			1			100	Т								
			2			100	1				Sitty Sand, readish orang	ge-brown, yellower with depth			
			3		100	Т	Т				huowa				
			3		100	1	1				brown				
			4	*											
			5							SM					
			6												
			0												
			7												
			8												
			9												
			10	*		85	15								
0.5	5					85	15								
		¥	11			95	5				Sand, brown, medium to	coarse			
			12												
			13												
			14												
										SP					
0.9	-		15	*		100									
			16			100									
			17												
		1	18		+										
			19												
0.5	,		20	*		100									
0.5		Ton		overage d			<u> </u>	l			Do ongon to 41 mit	h most hole diagon (longon			

Comments: Top 4' hand augered on 4/26/06. Sample from 4' collected. Re-auger to 4' with post-hole digger (larger diameter) prior to drilling. No mast, too close to overhead.





Comments: Top 4' hand augered on 4/26/06. Sample from 4' collected. Re-auger to 4' with post-hole digger (larger diameter) prior to drilling.

#### Client Boring No. Soun Pacific **Boring Log** Big Oil & Tire MW-8 Job Site/ Address: Northcrest 76 Job#: SP-170 Sheet 1500 Northcrest Drive, Crescent City, California Date: 5/9/2006 16 of 16 DRILLER INFORMATION PROJECT INFORMATION Site Map and Location of Boring Mitchell Drilling **Drilling Co.:** Project Manager: Andy Malone Rig Operator: Ed Mitchell Geologist: Gary Johnson Drilling Method: 8" Hollow Stem Auger Sampler: Jeff Gaines Sampling Method: EPA 5035/Split Barrel **Drill Rig Type:** CME NORTH Approximate Initial Water Level Reviewed By: Andy Malone 17 feet bgs **Boring Diameter:** 8 inch mw-8 Approximate Stabilized Water Level **Boring Depth:** 30 feet Temp. Well Screen? 12.67 feet bgs 5/18/06 No 41.7729257 -124.2007485 53.73 feet Lat: Long: **Elevation:** SOIL SAMPLE LOCATION Depth to Water (feet bgs) **Graphic Representation** PID Reading (ppm) Water Level DEPTH (feet) **GROUP FIELD NOTES** SAND SILTSYMBOL 100 SP 1.7 21 85 15 SP/SM 22 23 Sand, medium grey-browr 24 100 3.0 95 25 SP 26 27 28 100 6.3 100 29 silty zones typically dryer than clean sand zone 30 Bottom of Boring 29.5 feet 31 32 33 34 35 36 37 38 39

Comments: Bottom 5' of well filled in with sand. Driller could not run screen to bottom. Driller says bit plugged with bentonite from 4' auger hole.

# Appendix B



www.basiclab.com

voice 530.243.7234 2218 Railroad Avenue fax 530.243.7494 Redding, California 96001

June 16, 2006

Lab ID: 6050665

Andy Malone **SOUNPACIFIC** 4612 GREENWOOD HEIGHTS DR KNEELAND, CA 95549

RE: NORTHCREST 76 SP-170

Dear Andy Malone,

Enclosed are the analysis results for Work Order number 6050665. All analysis were performed under strict adherence to our established Quality Assurance Plan. Any abnormalities are listed in the qualifier section of this report.

If you have any questions regarding these results, please feel free to contact us at any time. We appreciate the opportunity to service your environmental testing needs.

Sincerely,

Ricky D. Jensen Laboratory Director

California ELAP Certification Number 1677



www.basiclab.com

fax 530.243.7494

voice 530.243.7234 2218 Railroad Avenue Redding, California 96001

Report To: SOUNPACIFIC

4612 GREENWOOD HEIGHTS DR

KNEELAND, CA 95549

Andy Malone Attention:

NORTHCREST 76 SP-170 Project: **Volatile Organic Compounds - Solid**  Lab No:

6050665

Reported: Phone:

06/16/06 707-269-0884

P.O. #

Volatile Orgai	nic Compound	as - Solia								
Analyte		Units	Results	Qualifier	MDL	RL	Method	Analyzed	Prepared	Batch
MW-1@9' Soil	(6050665-01)	Sampled:05	/09/06 00:00	Received:05/1	7/06 10:24					
Gasoline		mg/kg	ND			0.0600	EPA 8015/8260	05/17/06	05/17/06	B6E0437
Benzene		"	ND			0.0050	11	11	71	11
Toluene		"	ND			0.0050	n	**	11	n
Ethylbenzene		**	ND			0.0050	II	"	10	17
Xylenes (total)		u	ND			0.0050	11	11	11	II .
Methyl tert-butyl el	ther	11	0.0172			0.0050	11	11	"	"
Di-isopropyl ether		**	ND			0.0050	II .	"	"	U
Tert-amyl methyl ethe	er	н	ND			0.0050	"	"	"	"
Ethyl tert-butyl ether		19	ND			0.0050	"	"	11	11
Tert-butyl alcohol		11	ND			0.0500	. "	11	"	"
Surrogate: 4-Bromoflu			95.0 %		39-128		"	"	"	"
MW-1@13' Soil	(6050665-02)	Sampled:0	5/09/06 00:00	Received:05/						
Gasoline		mg/kg	ND			0.0600	EPA 8015/8260	05/17/06	05/17/06	B6E0437
Benzene			ND			0.0050	"			· . "
Toluene		"	ND			0.0050	"	"		<i>-</i>
Ethylbenzene			ND			0.0050	"	"		
Xylenes (total)			ND			0.0050				 M
Methyl tert-butyl ether	r	"	ND			0.0050	"	"		
Di-isopropyl ether		"	ND			0.0050				"
Tert-amyl methyl ethe	r .	,,	ND			0.0050			11	
Ethyl tert-butyl ether		"	ND			0.0050	н	n		
Tert-butyl alcohol		"	ND			0.0500	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,,		"
Surrogate: 4-Bromoflu			92.6 %		39-128					
MW-1@17' Soil	(6050665-03)	Sampled:0	5/09/06 00:00	Received:05/						
Gasoline		mg/kg	ND			0.0600	EPA 8015/8260	05/17/06	05/17/06	B6E0437
Benzene		"	ND			0.0050			,,	
Toluene			ND			0.0050	n n		,,	
Ethylbenzene			ND			0.0050	"			
Xylenes (total)			ND			0.0050	"			
Methyl tert-butyl ether	•		ND			0.0050	"			
Di-isopropyl ether		"	ND			0.0050				
Tert-amyl methyl ethe	r		ND			0.0050	" .	.,		
Ethyl tert-butyl ether		,,	ND			0.0050		,,		,,
Tert-butyl alcohol			ND		and the second s	0.0500	,,	,,	,,	
Surrogate: 4-Bromoflu			98.6 %	B	39-128				<del> </del>	
MW-1@21' Soil	(6050665-04)		5/09/06 00:00	Received:05/	<del>-</del>		· · · · · · · · · · · · · · · · · · ·			7470407
Gasoline		mg/kg	ND			0.0600	EPA 8015/8260	05/17/06	05/17/06	B6E0437
Benzene		"	ND			0.0050	11			
Toluene		n	ND			0.0050	"	"		
Ethylbenzene			ND			0.0050		,,		
Xylenes (total)		-	ND			0.0050	"		 D	
Methyl tert-butyl ether		"	ND			0.0050	"			
Di-isopropyl ether		n	ND			.0050	"			"
Tert-amyl methyl ether	r	,	ND			0.0050	"			
Ethyl tert-butyl ether		"	ND			0.0050	"		" "	11
Tert-butyl alcohol		11	ND			.0500	"	,,	,,	,,
Surrogate: 4-Bromoflu			92.0 %		39-128			<del></del>	<del>.</del>	
MW-1@25' Soil	(6050665-05)		5/09/06 00:00	Received:05/						
Gasoline		mg/kg	ND			.0600	EPA 8015/8260	05/17/06	05/17/06	B6E0437
Benzene		"	ND			.0050	rt 		17 11	"
Toluene		n	ND		С	.0050	H	ır	n	"

Approved By Basic Laboratory, Inc. California D.O.H.S. Cert #1677

Page 2 of 14



www.basiclab.com

fax **530.243.7494** 

voice 530.243.7234 2218 Railroad Avenue Redding, California 96001

Report To: SOUNPACIFIC

4612 GREENWOOD HEIGHTS DR

KNEELAND, CA 95549

Attention: Andy Maione

Project: NORTHCREST 76 SP-170 **Volatile Organic Compounds - Solid**  Lab No:

6050665

Reported: Phone:

06/16/06 707-269-0884

P.O. #

Analyte			Units	Results	Qualifier	MDL	RL	Method	<b>Analyzed</b>	Prepared	Batch
MW-1@25'	Soil	(6050665-05)	Sampled:	05/09/06 00:00	Received:05	/17/06 10:	24				
Ethylbenzene			11	ND			0.0050	Tr.	11	05/17/06	н
Xylenes (total)			11	ND			0.0050	11	"	11	"
Methyl tert-butyl	ether		n n	ND			0.0050	"	н	11	"
Di-isopropyl ethe	er		11	ND			0.0050	11	17	"	n
Tert-amyl methyl	l ether	-	11	ND			0.0050	**	11	н	17
Ethyl tert-butyl e	ther		11	ND			0.0050	n	"	11	11
Tert-butyl alcoho	ol		n	ND			0.0500	11	"	"	41
Surrogate: 4-Bro	moflu	orobenzene		91.8 %		<i>39-</i> .	128	"	"	"	"
MW-2@8' S	oil	(6050665-06)	Sampled:05	5/10/06 00:00	Received:05/:	7/06 10:2	4				
Gasoline			mg/kg	ND			0.0600	EPA 8015/8260	05/17/06	05/17/06	B6E0437
Benzene			"	ND			0.0050	"	"	**	"
Toluene			11	ND			0.0050	11	II	11	17
Ethylbenzene			"	ND			0.0050	"	"	" .	11
Xylenes (total)			ii .	ND			0.0050	н	п	*1	
Methyl tert-butyl	ether		11	ND			0.0050	11	"	n .	19
Di-isopropyl ether	r		"	ND			0.0050	11	11	n	
Tert-amyl methyl	l ether		"	ND			0.0050	11	11	19	11
Ethyl tert-butyl et			"	ND			0.0050	н	11	11	11
Tert-butyl alcohol			11	ND			0.0500	II	н	"	**
Surrogate: 4-Broi		orobenzene		90.8 %		<i>39-</i> 2	128	"	• #	"	"
MW-2@12' 9	Soil	(6050665-07)	Sampled:0	5/10/06 00:00	Received:05	17/06 10:	24				
Gasoline			mg/kg	ND			0.0600	EPA 8015/8260	05/17/06	05/17/06	B6E0437
Benzene			H	ND			0.0050		n	. H	".
Toluene			11	ND			0.0050	*1	II .	11	"
Ethylbenzene			"	ND			0.0050	n	"	11	11
Xylenes (total)			"	ND			0.0050	H	"		11
Methyl tert-butyl	ether		U	ND			0.0050	11	n	11	**
Di-isopropyl ether	r		11	ND			0.0050	11	19	н	II II
Tert-amyl methyl	ether		n	ND			0.0050	u	If	11	II
Ethyl tert-butyl et			n	ND			0.0050	н	97	"	17
Fert-butyl alcohol			II	ND			0.0500	11	n	"	n
Surrogate: 4-Broi		probenzene		95.8 %		39-1	128	"	"	· <i>n</i>	" "
MW-2@16' S	Soil	(6050665-08)	Sampled:0	5/10/06 00:00	Received:05/	17/06 10:2	24				
Sasoline		·-L	mg/kg	ND			0.0600	EPA 8015/8260	05/17/06	05/17/06	B6E0437
Benzene			II.	ND			0.0050	**	н	11	11
Toluene			11	ND			0.0050	11	11	"	11
thylbenzene			n.	ND			0.0050	U	11	**	*1
(ylenes (total)			n n	ND			0.0050	п	"	n	н
lethyl tert-butyl e	ether			ND			0.0050	11	n	11	11
)i-isopropyl ether			11	ND			0.0050	"	10	17	11
ert-amyl methyl			"	ND			0.0050	n	11	"	n
thyl tert-butyl et			19	ND			0.0050	"	11	u u	11
ert-butyl alcohol			17	ND			0.0500	97	п	11	**
Surrogate: 4-Bron		robenzene		89.2 %		<i>39-1</i>	28	n '	"	"	"
		(6050665-09)	Sampled:0	5/10/06 00:00	Received:05/	17/06 10:2	24		-		
MW-2@20' S			ma/ka	ND			0.0600	EPA 8015/8260	05/17/06	05/17/06	B6E0437
			mg/kg	ND							
Gasoline			ilig/kg	ND			0.0050	"	n	11	
Gasoline Benzene			mg/kg "				0.0050 0.0050	"	"	11	
Gasoline Benzene Foluene			11	ND				" "	"	11 11	n n
MW-2@20' S Gasoline Genzene Toluene Ethylbenzene (ylenes (total)	•		11	ND ND			0.0050		n 11 11		n n

Approved By

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

Page 3 of 14



voice 530.243.7234 fax **530.243.7494** 

2218 Railroad Avenue Redding, California 96001

**SOUNPACIFIC** Report To:

4612 GREENWOOD HEIGHTS DR

Lab No:

Reported:

6050665

06/16/06

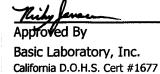
707-269-0884

Phone: KNEELAND, CA 95549 P.O. #

Andy Malone Attention:

NORTHCREST 76 SP-170 Project: **Volatile Organic Compounds - Solid** 

Analyte			Units	Results	Qualifier	MDL RL	Method	Analyzed	Prepared	Batch
MW-2@20'	Soil	(6050665-09)	Sampled:0	5/10/06 00:00	Received:05/	17/06 10:24				
Di-isopropyl ethe	er		17	ND		0.0050		н	05/17/06	11
Tert-amyl methy	l ether		11	ND		0.0050		II	11	11
Ethyl tert-butyl e	ether		n	ND		0.0050		11	IF	"
Tert-butyl alcoho	ol		II	ND		0.0500		n	11	,,
Surrogate: 4-Bro	omofluo	probenzene		93.6 %		<i>39-128</i>	"	"	"	"
MW-2@24'	Soil	(6050665-10)	Sampled:0!	5/10/06 00:00	Received:05/:	L7/06 10:24				
Gasoline			mg/kg	ND		0.0600	•	05/17/06	05/17/06	B6E0469
Benzene			11	ND		0.0050		"	*1	11
Toluene			n n	ND		0.0050		11	11	. 11
Ethylbenzene			"	ND		0.0050		"	11	"
Xylenes (total)			11	ND		0.0050		n	**	11
Methyl tert-butyl	ether		"	ND		0.0050		11	"	11
Di-isopropyl ethe	er		н	ND		0.0050		. 11	. 11	u
Tert-amyl methy	l ether		"	ND		0.0050		n	11	"
Ethyl tert-butyl e	ther		11	ND		0.0050		19	Ħ	11
Tert-butyl alcoho	ol		н	ND		0.0500		11	- 11	11
Surrogate: 4-Bro	mofluo	robenzene		87.6 %		<i>39-128</i>	n .	"	"	"
MW-2@28'	Soil	(6050665-11)	Sampled:05	5/10/06 00:00	Received:05/1	-				
Gasoline			mg/kg	ND		0.0600	•	05/17/06	05/17/06	B6E0469
Benzene			"	ND		0.0050		"	"	"
Toluene			"	ND		0.0050		n .	"	
Ethylbenzene			н	ND		0.0050		"	. "	
Xylenes (total)			II .	ND		0.0050	11	π .		"
Methyl tert-butyl	ether		11	ND		0.0050	n	**	11	"
Di-isopropyl ethe	r		n .	ND		0.0050	n	п	11	IP
Tert-amyl methyl	ether		n	ND		0.0050	li II	"	**	II
Ethyl tert-butyl et	ther		11	ND		0.0050		"	"	11
Tert-butyl alcohol	l		"	ND		0.0500		"	. 17	
Surrogate: 4-Bro	mofluoi	robenzene		96.6 %		39-128	"	"	"	"
MW-3@10'	Soil	(6050665-12)	Sampled:05	/10/06 00:00	Received:05/1	-				
Gasoline			mg/kg	ND		0.0600	•	05/18/06	05/18/06	B6E0469
Benzene			"	ND		0.0050			17	
Toluene			11	ND		0.0050				
Ethylbenzene			"	ND		0.0050	11			
Xylenes (total)			II .	ND		0.0050			"	"
Methyl tert-butyl			11	ND		0.0050				"
Di-isopropyl ether	r		"	ND		0.0050	"			"
Tert-amyl methyl			п	ND		0.0050			11	"
Ethyl tert-butyl et	her		"	ND		0.0050		"	"	11
Tert-butyl alcohol			11	ND		0.0500	n ,,	"	. "	
Surrogate: 4-Broi				94.8 %		<i>39-128</i>	"	"		
MW-3@15' 9	Soil	(6050665-13)	Sampled:05	/10/06 00:00	Received:05/1					
Gasoline			mg/kg	2.90	G-02	0.0600	EPA 8015/8260	05/18/06	05/18/06	B6E0469
Benzene				ND		0.0050			. "	
Toluene			"	ND		0.0050		"	17	11
Ethylbenzene			11	0.0347		0.0050	"	"		"
Xylenes (total)			"	0.0520		0.0050		II .	u	"
Methyl tert-butyl			н	ND		0.0050	"	"	"	n
Di-isopropyl ether			"	ND		0.0050	"	"	"	17
Tert-amyl methyl	ether		"	ND		0.0050	н	"	н	n
Ethyl tert-butyl et	her		n	ND		0.0050	"	II.	11	11





fax **530.243.7494** 

voice 530.243.7234 2218 Railroad Avenue Redding, California 96001

Report To: SOUNPACIFIC

4612 GREENWOOD HEIGHTS DR

KNEELAND, CA 95549 Attention: Andy Malone

NORTHCREST 76 SP-170 Project: **Volatile Organic Compounds - Solid**  Lab No: 6050665

Reported: 06/16/06

Phone: 707-269-0884

P.O. #

Analyte		Units	Results	Qualifier	MDL RL	Method	Analyzed	Prepared	Batch
MW-3@15' So	ii (6050665-13)	Sampled:0	5/10/06 00:00	Received:05/	17/06 10:24				
Tert-butyl alcohol		11	ND		0.0500	ıı	17	05/18/06	п
Surrogate: 4-Bromo	fluorobenzene		103 %		<i>39-128</i>	"	"	"	"
MW-3@20' So		Sampled:0	5/10/06 00:00	Received:05/	17/06 10:24				
Gasoline		mg/kg	2.67		0.0600	EPA 8015/8260	05/18/06	05/18/06	B6E0469
Benzene		"	ND		0.0050	11	11	U	II II
Toluene		10	0.0156		0.0050	n	ti	11	"
Ethylbenzene		**	0.0991		0.0050	"	"	"	n
Xylenes (total)		н	0.0719		0.0050	11	11	н	н
Methyl tert-butyl	ether	11	0.0088		0.0050	*1	*1	11	11
Di-isopropyl ether		n	ND		0.0050	II	U	ü	"
Tert-amyl methyl eth	ner	n	ND		0.0050	II .	11	"	n
Ethyl tert-butyl ether		II .	ND		0.0050	1Ī	11	"	11
Tert-butyl alcohol		11	ND		0.0500	"	**	"	11
Surrogate: 4-Bromoi	fluorobenzene		104 %		<i>39-128</i>	"	"	" .	"
MW-3@30' Soi		Sampled:0	5/10/06 00:00	Received:05/:	L7/06 10:24				
Gasoline	*****	mg/kg	0.166		0.0600	EPA 8015/8260	05/18/06	05/18/06	B6E0469
Benzene		11	ND		0.0050	n	н	11	**
Toluene		**	0.0161		0.0050	II.	H	п	н
Ethylbenzene		II.	ND		0.0050	u	"	10	**
Xylenes (total)		11	0.0193		0.0050	n	n	"	u
Methyl tert-butyl eth	er	n	ND		0.0050	. "	11		11
Di-isopropyl ether		10	ND		0.0050	TI TI	**	11	**
Tert-amyl methyl eth	er	11	ND		0.0050	n	n	11	"
Ethyl tert-butyl ether		11	ND		0.0050	n	11	n	"
Tert-butyl alcohol		ii	ND		0.0500	11	17	19	11
Surrogate: 4-Bromof	luorobenzene		84.8 %		<i>39-128</i>	"	"	"	"
MW-4@8' Soil	(6050665-16)	Sampled:05	/09/06 00:00	Received:05/17	7/06 10:24				
Gasoline		mg/kg	0.0632		0.0600	EPA 8015/8260	05/17/06	05/17/06	B6E0469
Benzene		"	0.0083		0.0050	Ħ	n	11	
Toluene		"	ND		0.0050	11	II*	u	11
Ethylbenzene		n	ND		0.0050	11	11	"	11
Xylenes (total)		II.	ND		0.0050	"	11	ir .	11
Methyl tert-butyl e	ther	11	0.0114		0.0050	"	**	tr	н
Di-isopropyl ether		**	ND		0.0050	n	n	**	H
Tert-amyl methyl eth	er	n	ND		0.0050	"	U	"	"
Ethyl tert-butyl ether		10	ND		0.0050	**	10	• н	11
Tert-butyl alcohol		11	ND		0.0500	H	11	- 10	**
Surrogate: 4-Bromofi	luorobenzene		<i>87.8</i> %		<i>39-128</i>	"	"	"	"
MW-4@12' Soil	(6050665-17)	Sampled:0	5/09/06 00:00	Received:05/1	7/06 10:24				·
Gasoline		mg/kg	ND		0.0600	EPA 8015/8260	05/17/06	05/17/06	B6E0437
Benzene		"	ND		0.0050	н	**	11	n
Toluene		n	ND		0.0050	10	"	n	11
Ethylbenzene		II .	ND		0.0050	u u	**	11	IF
(total)		11	ND		0.0050	n	"	"	11
Methyl tert-butyl e	ther	11	0.0295		0.0050	. "	п	41	n
Di-isopropyl ether		"	ND		0.0050	**	11	n	17
		11	ND		0.0050	n	11	10	*1
Tert-amyl methyl eth	er		110						
	er .	11	ND		0.0050	11	n	11	н
Tert-amyl methyl ethe Ethyl tert-butyl ether Tert-butyl alcohol	er	11				19 17	n 11	11	11

Basic Laboratory, Inc. California D.O.H.S. Cert #1677



fax 530.243.7494

voice 530.243.7234 2218 Railroad Avenue Redding, California 96001

Report To: SOUNPACIFIC

4612 GREENWOOD HEIGHTS DR

Lab No: Reported:

6050665 06/16/06

KNEELAND, CA 95549

Phone:

707-269-0884

**Attention:** Andy Malone P.O. #

Project: NORTHCREST 76 SP-170 **Volatile Organic Compounds - Solid** 

Analyte		Units	Results	Qualifier	MDL RL	Method	Analyzed	Prepared	Batch
MW-4@16' Soil	(6050665-18)	Sampled:0	5/09/06 00:00	Received:05/1	7/06 10:24				
Gasoline		mg/kg	ND		0.0600	EPA 8015/8260	05/17/06	05/17/06	B6E0437
Benzene		17	ND		0.0050	11	H	11	11
Toluene		Ħ	ND		0.0050	11	11	11	н
Ethylbenzene		н	ND		0.0050	H	"	Ħ	19
Xylenes (total)		IF	ND		0.0050	tt	"	II .	17
Methyl tert-butyl ether	•	"	ND		0.0050	11	11*	11	"
Di-isopropyl ether		11	ND		0.0050	n	"	"	11
Tert-amyl methyl ethe	r	11	ND		0.0050	n	11	11	17
Ethyl tert-butyl ether		n	ND		0.0050	11	11	11	"
Tert-butyl alcohol		11	ND		0.0500	ii.	"	**	n
Surrogate: 4-Bromoflu	orobenzene		91.6 %		<i>39-128</i>	"	"	"	"
MW-4@20' Soil	(6050665-19)	Sampled:0	5/09/06 00:00	Received:05/1	7/06 10:24				
Gasoline		mg/kg	ND		0.0600	EPA 8015/8260	05/17/06	05/17/06	B6E0437
Benzene		"	ND		0.0050	"	"	n	10
Toluene		"	ND		0.0050	"	II*	li .	. "
Ethylbenzene		11	ND		0.0050	"	11	"	"
Xylenes (total)		n	ND		0.0050	п	Ħ	**	u
Methyl tert-butyl ether		11	ND		0.0050	11		"	
Di-isopropyl ether		**	ND		0.0050	11	11	11	**
Tert-amyl methyl ether	r	TI TI	ND		0.0050	n	"	n n	"
Ethyl tert-butyl ether		"	ND		0.0050	R	н	"	11
Tert-butyl alcohol		"	ND		0.0500	11	"		11
Surrogate: 4-Bromoflu	orobenzene		92.8 %		<i>39-128</i>	"	"	H	"
MW-4@24' Soil	(6050665-20)	Sampled:0	5/09/06 00:00	Received:05/1	7/06 10:24				
Gasoline		mg/kg	ND		0.0600	EPA 8015/8260	05/17/06	05/17/06	B6E0437
Benzene		н	ND		0.0050	"	11	"	n
Toluene		11	ND		0.0050	11	n	11	11
Ethylbenzene		**	ND		0.0050	11	"	"	n
Xylenes (total)		н	ND		0.0050	n	**	11	N
Methyl tert-butyl ether		"	ND		0.0050	H	н	н	17
Di-isopropyl ether		n	ND		0.0050	11	"	"	"
Tert-amyl methyl ether	•	п	ND		0.0050	"	17	11	п
Ethyl tert-butyl ether		11	ND		0.0050	n	**	"	
Tert-butyl alcohol		••	ND		0.0500	II .	п	n	17
Surrogate: 4-Bromoflue			91.2 %		<i>39-128</i>	"	"	"	"
MW-4@28' Soil	(6050665-21)	Sampled:0!	5/09/06 00:00	Received:05/1	7/06 10:24				
Gasoline		mg/kg	ND		0.0600	EPA 8015/8260	05/17/06	05/17/06	B6E0437
Benzene		"	ND		0.0050				
Toluene			ND		0.0050	H	"	"	"
Ethylbenzene		"	ND		0.0050	11	n	"	"
Xylenes (total)		"	ND		0.0050	"	"	11	11
Methyl tert-butyl ether		17	ND		0.0050	"	"	"	"
Di-isopropyl ether		**	ND		0.0050	"	"	n	11
Tert-amyl methyl ether		"	ND		0.0050	"	n	II .	" .
Ethyl tert-butyl ether		"	ND		0.0050	n	н	10	n
Tert-butyl alcohol		**	ND		0.0500	н	11	"	. If
Surrogate: 4-Bromofluc			90.8 %		39-128	"	"	n	"
MW-5@10' Soil	(6050665-22)	Sampled:05	/10/06 00:00	Received:05/17					
Gasoline		mg/kg	0.0722	G-03	0.0600	EPA 8015/8260	05/18/06	05/18/06	B6E0469
Benzene		11	ND		0.0050	11	"	"	
Toluene		11	ND		0.0050	"	H	n	"

Basic Laboratory, Inc. California D.O.H.S. Cert #1677



voice **530.243.7234** fax 530.243.7494

2218 Railroad Avenue Redding, California 96001

> ND ND

ND

ND

ND

. Who said

SOUNPACIFIC Report To:

4612 GREENWOOD HEIGHTS DR

KNEELAND, CA 95549

Andy Malone Attention:

NORTHCREST 76 SP-170 **Project:** 

Lab No:

6050665

Reported: 06/16/06

Phone: 707-269-0884

P.O. #

Volatile Orgai			D   4 -	O	MBI	nı	Mathad	Analyzad	Dropprod	Datel
Analyte		Units	Results	Qualifier	MDL	RL	Method	Analyzed	l Prepared	Batch
MW-5@10' Soil	(6050665-22)	Sampled:0	5/10/06 00:00	Received:05/	17/06 10					
Ethylbenzene		11	ND			0.0050	"	"	05/18/06	**
(ylenes (total)		11	ND			0.0050	"	н	n n	11
dethyl tert-butyl el	ther	n n	0.0758			0.0050	11	17	"	н
Di-isopropyl ether		"	ND			0.0050	n	"	n	"
Fert-amyl methyl ethe	er	"	ND			0.0050	U	n	II.	**
thyl tert-butyl ether		н	ND			0.0050	"	"	"	"
Fert-butyl alcohol		n	ND			0.0500	11	11	11	11
Surrogate: 4-Bromoflu	vorobenzene		89.2 %			9-128	"	"	"	"
MW-5@8' Soil	(6050665-23)	Sampled:05	/10/06 00:00	Received:05/1	7/06 10:	24				
asoline		mg/kg	ND			0.0600	EPA 8015/8260	05/18/06	05/18/06	B6E046
enzene		H .	ND			0.0050	"	n n	11	11
oluene		**	ND			0.0050	u,	11	11	11
thylbenzene		11	ND			0.0050	11	II ·	n	11
ylenes (total)		n	ND			0.0050	11	11	п.	11
lethyl tert-butyl ether	•	u u	ND			0.0050	н	II .	11	**
i-isopropyl ether		n	ND			0.0050	11	rı	11	n
ert-amyl methyl ethe	r	11	ND			0.0050	11	10	Ħ	11
thyl tert-butyl ether	•	tr	ND			0.0050	n	11	11	"
ert-butyl alcohol			ND			0.0500	11	н	11	n
Turrogate: 4-Bromoflu	iorobenzene		91.4 %		39	7-128	"	"	"	"
IW-6@10' Soil	(6050665-24)	Sampled:0	5/11/06 00:00	Received:05/						
asoline		mg/kg	ND		-	0.0600	EPA 8015/8260	05/18/06	05/18/06	B6E046
enzene		"	ND			0.0050	"	n'	11	
oluene		#	ND			0.0050	ır		H	"
thylbenzene		n	ND			0.0050	11	"	10	**
ylenes (total)		11	ND			0.0050	H	**	11	**
ethyl tert-butyl ether		n	ND			0.0050	11	n	11	n
i-isopropyl ether		II .	ND			0.0050	11	11	**	17
ert-amyl methyl ethei	r	n	ND			0.0050	u	11	n	17
hyl tert-butyl ether:	l	"	ND			0.0050	и	**	H	.,
ert-butyl alcohol		"	ND			0.0500	II .	n	**	n
urrogate: 4-Bromoflu	vorobonzono		96.4 %		30	7-128	"	"	· "	. "
W-6@15' Soil	(6050665-25)	Sampled:01	5/11/06 00:00	Received:05/			<del></del>			
	(0030003-23)		ND	<del>Received to 7</del>		0.0600	EPA 8015/8260	05/17/06	05/17/06	B6E0469
asoline		mg/kg "	ND ND			0.0050	UFA 0015/0200	03/17/00	03/17/00	DOLUTO:
enzene		n	ND ND			0.0050	11		19	11
oluene hulberrene							n	11	17	n
hylbenzene			ND			0.0050	11		11	
vienes (total)		n	ND ND			0.0050 0.0050	10	н		11
ethyl tert-butyl ether			ND ND				11	11	п	11
-isopropyl ether	_	,,	ND ND			0.0050	11		11	n
ert-amyl methyl ether	r		ND			0.0050		"		н
hyl tert-butyl ether		"	ND			0.0050	"	 V	,,	
ert-butyl alcohol		**	ND			0.0500		.,		.,
urrogate: 4-Bromoflu			93.2 %			-128	"			
W-6@20' Soil	(6050665-26)	Sampled:05	5/11/06 00:00	Received:05/	17/06 10				<u> </u>	
asoline		mg/kg	ND			0.0600	EPA 8015/8260	05/18/06	05/18/06	B6E0469

0.0050

0.0050

0.0050

0.0050

0.0050

Methyl tert-butyl ether

Benzene

Toluene

Ethylbenzene Xylenes (total)

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

Page 7 of 14



voice 530.243.7234 fax **530.243.7494** 

2218 Railroad Avenue Redding, California 96001

Report To: SOUNPACIFIC

4612 GREENWOOD HEIGHTS DR

Lab No: Reported:

6050665 06/16/06

707-269-0884

KNEELAND, CA 95549

Phone: P.O. #

Andy Malone Attention:

NORTHCREST 76 SP-170 Project: **Volatile Organic Compounds - Solid** 

Analyte			Units	Results	Qualifier	MDL	RL	Method	Analyzed	Prepared	Batch
<del>MW-6@20'</del>	Soil	(6050665-26)	Sampled:0	5/11/06 00:00	Received:05/1	17/06 10:	24				
Di-isopropyl etl	her		"	ND			0.0050	n		05/18/06	19
Tert-amyl meth	nyl ether		H	ND			0.0050	H	"		11
Ethyl tert-butyl	ether		н	ND			0.0050		"	**	
Tert-butyl alcol	hol		III	ND			0.0500	11	11	"	"
Surrogate: 4-B	romofluc	orobenzene		91.8 %		<i>39-</i> 2		"			
MW-7@10'	Soil	(6050665-27)	Sampled:0!	5/11/06 00:00	Received:05/1	7/06 10:	24				
Gasoline			mg/kg	ND			0.0600	EPA 8015/8260	05/18/06	05/18/06	B6E0469
Benzene			II	ND			0.0050	19	17	11	"
Toluene			11	ND			0.0050	11	**	"	11
Ethylbenzene			"	ND			0.0050	n n	**	u	**
Xylenes (total)			"	ND			0.0050	n	n	"	**
Methyl tert-but	yl ether		n	ND			0.0050	"	17	"	n
Di-isopropyl eth	ner		II .	ND			0.0050	11	"	, "	"
Tert-amyl meth			11	ND			0.0050	**	1P	"	"
Ethyl tert-butyl			11	ND			0.0050	11	"	n	"
Tert-butyl alcoh	nol		u u	ND			0.0500	"	n	II .	"
Surrogate: 4-B		orobenzene		91.8 %		39-1	128	"	"	"	11
MW-7@15'		(6050665-28)	Sampled:0	5/11/06 00:00	Received:05/1	7/06 10:2	24				
Gasoline			mg/kg	ND			0.0600	EPA 8015/8260	05/18/06	05/18/06	B6E0469
Benzene			"	ND			0.0050	"	"	"	
Toluene			"	ND		*	0.0050	74. H	"	1 2 2 2	
Ethylbenzene			"	ND		.:	0.0050		"	. "	, · · · ·
Xylenes (total)			n	ND			0.0050	, " "		. "	
Methyl tert-but	yl ether		17	ND			0.0050	11	II .	11	"
Di-isopropyl eth	ner		"	ND			0.0050	11	11	n	**
Tert-amyl meth	yl ether		н	ND			0.0050	n	*1	.,	"
Ethyl tert-butyl	ether		11	ND			0.0050	II .	и	"	"
Tert-butyl alcoh	nol		"	ND			0.0500	"	u		n n
Surrogate: 4-Bi	romofluc	probenzene		92.0 %		39-1	28			"	"
MW-7@20'	Soil	(6050665-29)	Sampled:05	7/11/06 00:00	Received:05/1	7/06 10:2	24				
Gasoline			mg/kg	ND			0.0600	EPA 8015/8260	05/17/06	05/17/06	B6E0469
Benzene			11	ND			0.0050		n		
Toluene				ND			0.0050				11
Ethylbenzene			"	ND			0.0050	"	"		
Xylenes (total)			"	ND			0.0050	"			
Methyl tert-buty	yl ether		n	ND			0.0050		"		
Di-isopropyl eth	er		11	ND			0.0050	"			
Tert-amyl meth	yl ether		"	ND			0.0050	,	n	"	
Ethyl tert-butyl	ether		u	ND			0.0050		,,		"
Tert-butyl alcoh	ol		п	ND			0.0500	"	"	,,	. "
Surrogate: 4-Bi	romofluo			94.2 %		39-1			<i>"</i>		
MW-8@8'	Soil (	(6050665-30)	Sampled:05/	09/06 00:00	Received:05/17	/06 10:24	<u> </u>				
Gasoline			mg/kg	ND			0.0600	EPA 8015/8260	05/17/06	05/17/06	B6E0437
Benzene			11	ND			0.0050	. 11	"		"
Toluene			u u	ND			0.0050			11	"
Ethylbenzene			ır	ND			0.0050	n .			
Xylenes (total)			п	ND			0.0050	н	11	···	"
Methyl tert-buty	/l ether		п	ND			0.0050	n	11	п	
Di-isopropyl eth	er		11	ND			0.0050	11	"	п	H
Tert-amyl meth			"	ND			0.0050	17			"
Ethyl tert-butyl	-		11	ND			0.0050	u u	"	11	11

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

Page 8 of 14



voice **530.243.7234** fax **530.243.7494** 

2218 Railroad Avenue Redding, California 96001

Report To: SOUNPACIFIC

KNEELAND, CA 95549

4612 GREENWOOD HEIGHTS DR

Lab No: Reported:

6050665 06/16/06 707-269-0884

Attention:

Phone: P.O. #

Andy Malone

**Project:** NORTHCREST 76 SP-170 **Volatile Organic Compounds - Solid** 

Analyte		Units	Results	Qualifier	MDL	RL	Method	Analyzed	Prepared	Batch
MW-8@8' Soil	(6050665-30)	Sampled:05	6/09/06 00:00	Received:05/1	7/06 10:2	4				
Tert-butyl alcohol		11	ND			0.0500	II	11	05/17/06	+1
Surrogate: 4-Bromot	Tuorobenzene		92.8 %		39-		"	"	"	"
MW-8@12' Soi	(6050665-31)	Sampled:0	5/09/06 00:00	Received:05/	17/06 10:	24				
Gasoline	,	mg/kg	ND			0.0600	EPA 8015/8260	05/17/06	05/17/06	B6E0437
Benzene		11	ND			0.0050	u.	"	n	"
Toluene		II	ND			0.0050	Ħ	n	"	11
Ethylbenzene		11	ND			0.0050	"	11	11	"
Xylenes (total)		"	ND			0.0050	11	11	"	**
Methyl tert-butyl ethe	er	n	ND			0.0050	"	U	"	"
Di-isopropyl ether		"	ND			0.0050	н	n	"	"
Tert-amyl methyl eth	er	н	ND			0.0050	"		10	"
Ethyl tert-butyl ether		19	ND			0.0050	97	11	11	"
Tert-butyl alcohol		"	ND			0.0500	n "	n .	"	"
Surrogate: 4-Bromofi			92.8 %		39					"
MW-8@16' Soil	(6050665-32)	Sampled:0	5/09/06 00:00	Received:05/	17/06 10:	24				
Gasoline		mg/kg	ND			0.0600	EPA 8015/8260	05/17/06	05/17/06	B6E0437
Benzene		н	ND			0.0050		"		
Toluene		u u	ND			0.0050	**	"	11	"
Ethylbenzene		11	ND			0.0050	"	**	**	"
Xylenes (total)		н	ND			0.0050			"	"
Methyl tert-butyl ethe	r	"	ND			0.0050	"	"		"
Di-isopropyl ether		11	ND			- 0.0050	11	"	. "	11
Tert-amyl methyl eth	er	"	ND			0.0050	11		"	п
Ethyl tert-butyl ether		n	ND			0.0050	"	"	"	"
Tert-butyl alcohol		"	ND			0.0500	11	17	11	11
Surrogate: 4-Bromoff	uorobenzene		95.0 %		39-1		n	"	"	"
MW-8@20' Soil	(6050665-33)	Sampled:0	5/09/06 00:00	Received:05/:	17/06 10:2	24				
Gasoline		mg/kg	ND			0.0600	EPA 8015/8260	05/17/06	05/17/06	B6E0437
Benzene		**	ND			0.0050	n	11	**	0
Toluene		н	ND			0.0050	II .	U	"	"
Ethylbenzene		11	ND			0.0050	11	H	11	H
Xylenes (total)		n	ND			0.0050	n	11	u	11
Methyl tert-butyl ethe	r	"	ND			0.0050	17	**	"	"
Di-isopropyl ether		11*	ND			0.0050	11	"	11	"
Tert-amyl methyl ethe	er	ır	ND			0.0050	ii	II	"	11
Ethyl tert-butyl ether		n	ND			0.0050	n	11	н	11
Tert-butyl alcohol		II.	ND			0.0500	II .	11	u	11
Surrogate: 4-Bromofile	uorobenzene		91.0 %		39-1	-	"	"	" .	"
MW-8@24' Soil	(6050665-34)	Sampled:0	5/09/06 00:00	Received:05/1	L7/06 <b>10</b> :2	24				
Gasoline	<del></del>	mg/kg	ND			0.0600	EPA 8015/8260	05/17/06	05/17/06	B6E0437
Benzene		u ·	ND			0.0050	11	11	n	
Toluene		"	ND			0.0050	ŧI	н	11	н
Ethylbenzene		II .	ND			0.0050	н	"	"	11
Xylenes (total)		11	ND			0.0050	II.	11	п	11
Methyl tert-butyl ether	•	n	ND			0.0050	11	"		n
Di-isopropyl ether		11	ND			0.0050	n	17	11	n
Tert-amyl methyl ethe	r	11	ND			0.0050	11	17	н	"
Ethyl tert-butyl ether		н	ND			0.0050	11	II .	н	
Tert-butyl alcohol		11	ND			0.0500	н	п	ır	11
Surrogate: 4-Bromoflu	iorobenzene		92.6 %		39-1		"	"	"	"

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

Page 9 of 14



voice **530.243.7234** fax **530.243.749**4

2218 Railroad Avenue Redding, California 96001

Report To: S

SOUNPACIFIC

4612 GREENWOOD HEIGHTS DR

KNEELAND, CA 95549

Attention:

Andy Malone

**Volatile Organic Compounds - Solid** 

**Project:** NORTHCREST 76 SP-170

Lab No:

6050665

Reported: Phone: 06/16/06 707-269-0884

P.O. #

Analyte	Units	Results	Qualifier	MDL	RL	Method	Analyzed	Prepared	Batch
MW-8@28' Soil (6050665-	35) Sampled:0	5/09/06 00:00	Received:05	/17/06 1	L0:24				
Gasoline	mg/kg	ND			0.0600	EPA 8015/8260	05/17/06	05/17/06	B6E0437
Benzene	"	ND			0.0050	n	"	n	17
Toluene	ıı ı	ND			0.0050	"	n	11	"
Ethylbenzene	ır	ND			0.0050	ır	10	"	11
Xylenes (total)	n	ND			0.0050	n	11	11	u
Methyl tert-butyl ether	11	ND			0.0050	11	H	n	н
Di-isopropyl ether	n	ND			0.0050	11	u u	11	.,
Tert-amyl methyl ether	u	ND			0.0050	**	11	n	11
Ethyl tert-butyl ether	n	ND			0.0050	n	W.	11	**
Tert-butyl alcohol	11	ND			0.0500	"	н	ır	n
Surrogate: 4-Bromofluorobenzene		90.2 %			39-128	"	"	"	"

Approved By

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

Page 10 of 14



fax 530.243.7494

voice 530.243.7234 2218 Railroad Avenue Redding, California 96001

**Report To:** SOUNPACIFIC

Atte

**Project:** NORTHCREST 76 SP-170

**TPH Diesel & Motor Oil - Solid** 

-	4612 GREENWOOD HEIGHTS DR	Reported:	06/16/06
	KNEELAND, CA 95549	Phone:	707-269-0884
tention:	Andy Malone	P.O. #	

Analyte			Units	Results	Qualifier	MDL	RL	Method	<b>Analyzed</b>	Prepared	Batch
MW-1@9'	Soil	(6050665-01)	Sampled:05/	09/06 00:00	Received:05/12	7/06 10:24			-		
Diesel			mg/kg	ND			10	EPA 8015 MOD	05/25/06	05/19/06	B6E0476
Motor Oil			ŧi	ND			10	"	"	11	"
Surrogate: Oc				89.8 %		50-150	,				
MW-1@13	' Soil	(6050665-02)		/09/06 00:00	Received:05/	17/06 10:24					
Diesel			mg/kg	ND			10	EPA 8015 MOD	05/25/06	05/19/06	B6E0476
Motor Oil		_	"	ND		50-150	10		 ,,		
Surrogate: Oc		(6050665-03)	CamplediOE	97.9 % <b>/09/06 00:00</b>	Received:05/1						
MW-1@17	Soil	(0030003-03)	<u>-</u>	•	Received.05/1	17/00 10.24	10	EDA COSE MOD	05/25/06	05/10/06	DCE0476
Diesel			mg/kg "	ND ND			10 10	EPA 8015 MOD	05/25/06	05/19/06 "	B6E0476
Motor Oil Surrogate: Oc	tacosani			101 %		50-150	10	"	"	"	"
MW-1@21		(6050665-04)	Sampled:05	/09/06 00:00	Received:05/1						
Diesel		(000000000000)	mg/kg	ND	11000110011007		10	EPA 8015 MOD	05/25/06	05/19/06	B6E0476
Motor Oil			ing/kg	ND ND			10	n	03,23,00	03/13/00	"
Surrogate: Oc	tacosane	,		131 %		50-150		"	"	"	"
MW-1@25'	Soil	(6050665-05)	Sampled:05	/09/06 00:00	Received:05/1	l7/06 10:24					
Diesel			mg/kg	ND			10	EPA 8015 MOD	05/25/06	05/19/06	B6E0476
Motor Oil			11	ND			10	18	11	u	*11
Surrogate: Oc				101 %		50-150		"	"	"	"
MW-2@8'	Soil	(6050665-06)	Sampled:05/:		Received:05/17	7/06 10:24					
Diesel			mg/kg	ND			10	EPA 8015 MOD	05/25/06	05/19/06	B6E0476
Motor Oil		•	"	ND		50 150	10	"	"	" .	"
Surrogate: Oct			Compute de OF	85.6 %	Descined OF /4	50-150		<del>"</del>	····	······································	
MW-2@12'	Soil	(6050665-07)		/10/06 00:00	Received:05/1	17/06 10:24			0.7/0.7/0.7	0.7/2.7/2.4	
Diesel			mg/kg	ND ND	QR-02		10 10	EPA 8015 MOD	05/26/06	05/23/06	B6E0563
Motor Oil Surrogate: Oct	tarneana	•		ND <i>68.2 %</i>		50-150	10	"	"	"	,,
MW-2@16'		(6050665-08)	Sampled:05	/10/06 00:00	Received:05/1						
Diesel	5011	(0030003 00)	mg/kg	ND	QR-02	.7,00 1012-1	10	EPA 8015 MOD	05/26/06	05/23/06	B6E0563
Motor Oil			ilig/kg	ND	QIV-02		10	"	"	"	"
Surrogate: Oct	tacosane	1		71.5 %		50-150		"	"	"	"
MW-2@20'	Soil	(6050665-09)	Sampled:05	/10/06 00:00	Received:05/1	7/06 10:24					
Diesel		- `	mg/kg	ND	QR-02	···	10	EPA 8015 MOD	05/26/06	05/23/06	B6E0563
Motor Oil			"	ND	•		10	11	11	11	n
Surrogate: Oct	acosane			110 %		50-150		"	"	"	"
MW-2@24'	Soil	(6050665-10)	Sampled:05/	10/06 00:00	Received:05/1	7/06 10:24					
Diesel			mg/kg	ND	QR-02		10	EPA 8015 MOD	05/26/06	05/23/06	B6E0563
Motor Oil			n	ND			10	"	н	11	11
Surrogate: Oct				107 %		50-150		"	"		"
MW-2@28'	Soil	(6050665-11)		10/06 00:00	Received:05/1	7/06 10:24					
Diesel			mg/kg	ND	QR-02		10	EPA 8015 MOD	05/26/06	05/23/06	B6E0563
Motor Oil			"	ND 103.04		E0 1E0	10	"	"	"	"
Surrogate: Oct		(60E066E-12\	Sampled:05/	102 %	Received:05/1	50-150			**		
MW-3@10'	Soil	(6050665-12)				7 / UO 1U:24	10	ED4 0045 1405	05/06/06	05/22/25	DCCOCCO
Diesel Motor Oil			mg/kg "	ND ND	QR-02		10 10	EPA 8015 MOD	05/26/06	05/23/06	B6E0563
Motor Oil Surrogate: Oct	acosane			90.7 %		50-150	10	"	"	"	"
MW-3@15'	Soil	(6050665-13)	Sampled:05/	10/06 00:00	Received:05/1						
144-J@LJ	5011	(AAAAAAAA-T2)	Jampicu.03/	20,000000	ccciveu.us/ I	,,00 10.24					



Basic Laboratory, Inc. California D.O.H.S. Cert #1677 **Lab No:** 6050665



voice 530.243.7234 2218 Railroad Avenue fax **530.243.7494** 

Redding, California 96001

Report To: SOUNPACIFIC

4612 GREENW

KNEELAND, CA 95549

Attention: Andy Malone

Project: NORTHCREST 76 SP-170

**TPH Diesel & Motor Oil - Solid** 

	Lab No:	6050665
WOOD HEIGHTS DR	Reported:	06/16/06
CA 95549	Phone:	707-269-0884

Phone:

P.O. #

Analyte			Units	Results	Qualifier	MDL	RL	Method	<b>Analyzed</b>	Prepared	Batch
MW-3@15'	Soil	(6050665-13)	Sampled:0	5/10/06 00:00	Received:05/	17/06 10:24					
Diesel			mg/kg	ND	QR-02		10	EPA 8015 MOD	06/02/06	05/23/06	B6E0563
Motor Oil		_	"	ND		F0 1F0	10	"	n ,,	11	n "
Surrogate: Oct			Commission (	125 %	Received:05/	50-150					
MW-3@20'	Soil	(6050665-14)		5/10/06 00:00		17/00 10:24	10	EPA 8015 MOD	06/02/06	05/23/06	B6E0563
Diesel Motor Oil			mg/kg "	ND ND	QR-02		10 10	EPA 6015 MOD	06/02/06	05/23/06	n D0E0303
Surrogate: Oct	tacosane	,		111 %		50-150		#	"	"	"
MW-3@30'		(6050665-15)	Sampled:0	5/10/06 00:00	Received:05/	17/06 10:24					
Diesel	-		mg/kg	ND			10	EPA 8015 MOD	05/25/06	05/19/06	B6E0476
Motor Oil			н	ND			10	n	11	n .	
Surrogate: Oct				90.7 %		50-150	1				"
	Soil	(6050665-16)			Received:05/1	7/06 10:24					
Diesel			mg/kg	ND			10	EPA 8015 MOD	05/25/06	05/19/06	B6E0476
Motor Oil Surrogate: Oct	tacocana	•	-	ND <i>82.0 %</i>		50-150	10	"	"	<i>u</i>	"
MW-4@12'	Soil	(6050665-17)	Sampled:05	5/09/06 00:00	Received:05/						<del></del>
Diesel		(0000000 17)	mg/kg	ND			10	EPA 8015 MOD	05/25/06	05/19/06	B6E0476
Motor Oil			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	ND			10	11	11	11	"
Surrogate: Oct	tacosane			81.1 %		50-150		n	"	"	"
MW-4@16'	Soil	(6050665-18)	Sampled:05	5/09/06 00:00	Received:05/:	17/06 10:24					
Diesel		•	mg/kg	ND			10	EPA 8015 MOD	05/25/06	05/19/06	B6E0476
Motor Oil			n	ND 76.0.04		50.150	10	"	"	"	"
Surrogate: Oct	acosane Soil	(6050665-19)	ComplediOF	76.9 % 5/09/06 00:00	Received:05/:	<i>50-150</i>				*	
MW-4@20'	3011	(0030003-19)		ND	Received:05/.	17/00 10:24	10	EPA 8015 MOD	05/25/06	05/19/06	B6E0476
Diesel Motor Oil			mg/kg	ND ND			10	EPA 8015 MOD	U3/23/U6 "	05/19/06	DOEU470 "
Surrogate: Oct	acosane			96.1 %		50-150	-0	"	"	"	"
MW-4@24'	Soil	(6050665-20)	Sampled:05	5/09/06 00:00	Received:05/1	L7/06 10:24					
Diesel			mg/kg	ND			10	EPA 8015 MOD	05/25/06	05/19/06	B6E0476
Motor Oil			n	ND			10	н	"	**	19
Surrogate: Octo		<del> </del>		105 %		50-150		п	"	"	
MW-4@28'	Soil	(6050665-21)		/09/06 00:00	Received:05/1	17/06 10:24					
Diesel			mg/kg	ND			10	EPA 8015 MOD	05/25/06	05/19/06	B6E0476
Motor Oil	ecocena			ND <i>102 %</i>		50-150	10	"	"	"	"
Surrogate: Octa	Soil	(6050665-22)	Sampled:05	<del>5/10/06 00:00</del>	Received:05/1						
Diesel	50	(0000000 11)	mg/kg	ND	1100011001007	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	10	EPA 8015 MOD	05/25/06	05/19/06	B6E0476
Motor Oil			mg/kg	ND			10	"	"	"	11
Surrogate: Octa	acosane			108 %		<i>50-150</i>		"	"	"	"
MW-5@8'	Soil (	(6050665-23)	Sampled:05/	10/06 00:00	Received:05/17	//06 10:24					
Diesel			mg/kg	ND	QR-02		10	EPA 8015 MOD	06/02/06	05/23/06	B6E0563
Motor Oil			н	ND			10	n "	11	"	"
Surrogate: Octa		(COPOCCE DC)	6	129 %	Daniel der /a	50-150		"	"	"	
MW-6@10'	Soil	(6050665-24)	-	/11/06 00:00	Received:05/1		10	FD4 0017 1107	0.5 (0.0 (0.5	05/04/05	D.CEO.EEE
Diesel			mg/kg "	ND ND			10 10	EPA 8015 MOD	06/02/06	05/24/06	B6E0577
Motor Oil Surrogate: Octa	acosane			ND <i>123 %</i>		50-150	10	"	"	,,	"
MW-6@15'	Soil	(6050665-25)	Sampled:05	/11/06 00:00	Received:05/1						
	JVII	(3000000 20)	Jumpicuros	,, ~~ ~~ ~~ ~~ ~~ ~~ ~~ ~~ ~~ ~~ ~~ ~~ ~~		,					

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

Page 12 of 14



Attention:

www.basiclab.com

voice 530.243.7234 2218 Railroad Avenue fax **530.243.7494** 

Redding, California 96001

Report To: SOUNPACIFIC

4612 GREENWOOD HEIGHTS DR

Reported: Phone:

6050665 06/16/06 707-269-0884

KNEELAND, CA 95549

Andy Malone

P.O. #

Lab No:

NORTHCREST 76 SP-170 Project:

**TPH Diesel & Motor Oil - Solid** 

Motor Oil	Analyte			Units	Results	Qualifier	MDL	RL	Method	Analyzed	Prepared	Batch
Motor Oil	MW-6@15'	Soil	(6050665-25)	Sampled:0	5/11/06 00:00	Received:05	/17/06 10:24					
No.   Surrogate: Octacosane	Diesel		-						EPA 8015 MOD	06/02/06	05/24/06	B6E0577
Sumple   Colorosale   Sumple   Colorosale	Motor Oil			11					"	"		"
Diese    mg/kg   ND												
Motor Oi	MW-6@20'	Soil	(6050665-26)	Sampled:0	<u> </u>	Received:05/	17/06 10:24					
Surrogate: Octacosane	Diesel			mg/kg				-	EPA 8015 MOD	06/02/06	05/24/06	B6E0577
Surrogate: Octacosane		_		"					"	"	"	"
Diese								'		·····		<u>"</u>
Motor Oil   ND   10		Soil	(6050665-27)			Received:05/	17/06 10:24					
Mile	Diesel								EPA 8015 MOD	06/02/06	05/24/06	B6E0577
MW-7@15   Soii   (6050665-28)   Sampled:05/11/06 00:00   Received:05/17/06 10:24				"			F0 4F0	10	"	"	"	",
Diese    mg/kg				Commission		Donahundi OF						-
Motor Oil		2011	(6050665-28)		<u> </u>	Received:05/	17/06 10:24					
105 %   50-150				mg/kg					EPA 8015 MOD	06/02/06	05/24/06	B6E0577
MW-7@20'   Soil   (6050665-29)   Sampled:05/11/06 00:00   Received:05/17/06 10:24				"			50.150	10	"	.,	,,	"
Diese    mg/kg   ND				Campledini		Descived:0E/						
Motor Oil   ND   Surrogate: Octacosane   ND   ND   ND   ND   ND   ND   ND   N		Soli	(6050665-29)			Receivea:05/	17/06 10:24					
Surrogate: Octacosane				mg/kg	• • • •				EPA 8015 MOD	06/02/06	05/24/06	B6E0577
MW-8@8'   Soil   (6050665-30)   Sampled:05/09/06 00:00   Received:05/17/06 10:24							E0 1E0	10			"	"
Diesel			(60E066E 20)	ComplediAE		DogobrodiAE/1						
No		30II	(0050005-30)			Received:05/1	7/00 10:24				07/10/20	
Surrogate: Octacosane				mg/kg					EPA 8015 MOD	05/25/06	05/19/06	B6E04/6
MW-8@12' Soil (6050665-31)   Sampled:05/09/06 00:00   Received:05/17/06 10:24							E0 1E0	10	"	"	"	"
Diese			/60E066E 21\	ComplediAi		Passivadi0E/						
ND   10   10   10   10   10   10   10   1		3011	(0030003-31)		<u> </u>	Received:05/	17/00 10:24			0.7/0.7/0.6	05/10/05	D.C. T.O. 1.D.C.
Surrogate: Octavosane				mg/kg					EPA 8015 MOD	05/25/06	05/19/06	B6E0476
MW-8@16' Soil (6050665-32) Sampled:05/09/06 00:00 Received:05/17/06 10:24    Motor Oil		2000200					50-150	10	"	"	"	"
Diesel			(60E066E-22)	Sampled:05		Peceived:05/				· · · · · · · · · · · · · · · · · · ·		<del> </del>
ND		3011	(0030003-32)			Keceived.05/	17/00 10.24	10	ED4 001E MOD	05/25/06	05/10/06	DCE0476
102 %   50-150				mg/kg					EPA 8015 MOD	05/25/06	05/19/06	B0EU4/6
MW-8@20' Soil (6050665-33) Sampled:05/09/06 00:00 Received:05/17/06 10:24    Mg/kg		arneana					50-150	10	"	"	"	"
Motor Oil   mg/kg   ND   10   EPA 8015 MOD   05/25/06   05/19/06   B6E0476			(6050665-33)	Sampled:05		Received:05/						
Motor Oil		3011	(0030003 33)		<u> </u>	Receivedios	17/00 10:12-1	10	EDA 901E MOD	05/25/06	0E/10/06	D6E0476
108 %   50-150				mg/kg					EPA 6013 PIOD	03/23/00	05/19/06	11
MW-8@24' Soil (6050665-34) Sampled:05/09/06 00:00 Received:05/17/06 10:24  Diesel mg/kg ND 10 EPA 8015 MOD 05/25/06 05/19/06 B6E0476  ND 10 " " " " " " "  MW-8@28' Soil (6050665-35) Sampled:05/09/06 00:00 Received:05/17/06 10:24  Diesel mg/kg ND 10 EPA 8015 MOD 05/25/06 05/19/06 B6E0476  Motor Oil " mg/kg ND 10 EPA 8015 MOD 05/25/06 05/19/06 B6E0476  Motor Oil " ND 10 " " " " " "		acosane					50-150	10	"	"	"	"
Motor Oil   mg/kg			(6050665-34)	Sampled:05		Received:05/						
Motor Oil "ND 10 """""""""  Surrogate: Octacosane 96.4 % 50-150 """""""  MW-8@28' Soil (605065-35) Sampled:05/09/06 00:00 Received:05/17/06 10:24  Diesel mg/kg ND 10 EPA 8015 MOD 05/25/06 05/19/06 B6E0476  Motor Oil "ND 10 """"""""		5511	(5050005-5-4)			/	/	10	EDA QO1E MOD	05/25/06	05/10/06	B6E0476
Surrogate: Octacosane         96.4 %         50-150         " <t< td=""><td></td><td></td><td></td><td>ilig/kg</td><td></td><td></td><td></td><td>-</td><td>TLM 0012 MOD</td><td>03/23/00</td><td>17/00</td><td>"</td></t<>				ilig/kg				-	TLM 0012 MOD	03/23/00	17/00	"
MW-8@28' Soil (6050665-35) Sampled:05/09/06 00:00 Received:05/17/06 10:24  Diesel mg/kg ND 10 EPA 8015 MOD 05/25/06 05/19/06 B6E0476  Motor Oil " ND 10 " " " " "		acosane					50-150	10	"	"	"	"
Diesel mg/kg ND 10 EPA 8015 MOD 05/25/06 05/19/06 B6E0476 Motor Oil "ND 10 """"""			(6050665-35)	Sampled:05		Received:05/						
Notor Oil " ND 10 " " "	Diesel						<u> </u>	10	EPA 8015 MOD	05/25/06	05/19/06	B6E0476
	Motor Oil			פיי,פייי					"	-5, 25, 55	"	"
		acosane					50-150	-	"	"	"	"

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

Page 13 of 14



voice **530.243.7234** 

2218 Railroad Avenue

fax 530.243.7494

Redding, California 96001

**SOUNPACIFIC** Report To:

4612 GREENWOOD HEIGHTS DR

Lab No:

Reported: 06/16/06 Phone: 707-269-0884

6050665

P.O. #

KNEELAND, CA 95549 Attention:

Andy Malone

Project: NORTHCREST 76 SP-170

#### **Notes and Definitions**

QR-02 The RPD result for the MS/MSD exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted

based on percent recoveries and completeness of QC data.

G-03 The GRO result reported for this sample does not match the laboratory's gasoline standard, but is due primarily to MTBE.

G-02 The GRO result reported for this sample does not match the laboratory's gasoline standard.

siai sii

Analyte DETECTED DET

Analyte NOT DETECTED at or above the detection limit ND

NR Not Reported

Sample results reported on a dry weight basis dry

RPD Relative Percent Difference Less than reporting limit

Less than or equal to reporting limit ≤

> Greater than reporting limit

Greater than or equal to reporting limit ≥

MDL Method Detection Limit

RL/ML Minimum Level of Quantitation

MCL/AL Maxium Contaminant Level/Action Level

mg/kg Results reported as wet weight TTLC **Total Threshold Limit Concentration** STLC Soluble Threshold Limit Concentration TCLP Toxicity Characteristic Leachate Procedure

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

BASIC LABORATORY CHAIN OF C		LAB #:
2218 Railroad Ave., Redding, CA 96001 (530) 2		6050665 SAMPLE TYPE:
	PROJECT NAME: PROJECT #:  Worth Crest 76 SP-170	
ADDRESS:	, , , , , , , , , , , , , , , , , , ,	# OF SAMPLES:
SounPacific  P.O. Box 13	Standard 6/1/06 -	35
Kneeland, US 95549	TURN AROUND TIME: STD RUSH ANALYSIS REQUESTED	PAGEOF
PROJECT MANAGER:  Andr Malone		REP:
PHONE: FAX: E-MAIL: and y @ 107-269-0699 sounpacific. com invoice to:	(ETA 8260 L) (ETA 8260 L) (ETA 8260 L) (ETA 8015)	ID#:
Sountacitic Soumpacific.com	1 0 B 8 (ERA 8 (ERA 8 (ERA 8 (ERA 8 4 (ERA 8 8 (ERA 8 4	SYSTEM#:
SPECIAL MAIL E-MAIL FAX EDT		GLOBAL ID #: <b>TOGO USOOOG</b>
W C S ZOOG Subsurface T M I Investigation (prilling)	8 TXE 8 TXE 1794 6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	QC = 1 2 3 4
DATE TIME R P L SAMPLE DESCRIPTION		ID REMARKS
5-9-06 X MW-109'	5 X X X X X	1
MW-1 @ 13'		2
MW-1 @ 17'		3
MW-1 @ 21'		4
W-10 25'		3
510-06 MW-20 81		6
MW-2012		7
MW-2 @ 16'		8
Mw-2 @ 20'		7
MW-2 0 24'		0
MW-2 @ 281		11
MW-3 @ 10'		12
MW-3@151	1	3
MW-3 @ 20'		14
WW-3 @ 30'		5
5-9-06 MW-40 8'		6
MW-4 @ 12'		7
MW-4 @ 16'		8
MW-400 20'		9
		0
PRESERVED WITH: HNO <sub>3</sub> H <sub>2</sub> SO <sub>4</sub> NaOH ZnAce/NaOH	HCL NaThio OTHER Na HSO4.	
	ELINQUISHED BY: D	ATE/TIME:
Test Gaines 5-11-00 DATE/TIME: R		(-15-06 ATE/TIME:
· ·	ELINQUISHED BY:	ATE/TIME:
ECEIVED BY LAB: (VERIFIED) 5/DATE/TIME:  VELLUA ALL 5/17/06 10:24 S/	MADI ES SHIPPED VIA: OR FERTY DOOR TO	OTUED.
Wellax Jak 117/06 10:24 "	AMPLES SHIPPED VIA: UP FEDEX POST BUS	OTHER

BASIC LABORATORY CHAIN OF CUSTODY RECORD												#:
2218 Railroad Ave., Redding, CA 96001 (530) 2	43-7	234	FA	X (5	30) 2	243-7	494				60	050665
CLIENT NAME:	1 .	)JECT			<b>.</b>				JECT :		SAM	PLE TYPE:
Sounfactic	Yorthcrest 76 SP-170 REQUESTED COMP. DATE: STATE FORMS									01		
Sounfactic ADDRESS: P.O. Box 13					•	•	<i>(</i> ,	STAT	TE FOI	RMS?		SAMPLES:
7.0.00x 19								ļ			<del>  '</del>	
Kneeland, CA 95521	TUR	N AR	OUN			STD [	<del>,                                    </del>	RU	JSH [		PA	.ge_2_of_2_
PROJECT MANAGER:	†	<b>—</b>		Τ	T	1					+	REP:
Andy Malone	#			_								
PHONE: FAX: E-MAIL: and y @	0	9	90	5		10						ID#:
10/-1261-0804 101-267-0617 Sounpacific. com INVOICE TO: 30#greg 60	{	8260b	(4042A	8240h	3 3	3108						SYSTEM#:
Soun Pacific. Soun pacific com	В		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	שר ער	7		l					
SPECIAL MAIL FAX EDT	Т	(EPA	35	\$ \$	2 2 2 4 3 4							GLOBAL ID #:
W c s 2006 Subsurface	T L		ر د		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		l			İ		T0601500006
	E S	MA	X	ع [	3	CM/TY						QC = 1 2 3 4
DATE TIME R L SAMPLE DESCRIPTION		6	Ø	100 Jan 100 Ja	1277	1					LAB ID	REMARKS
5-9-06 MW-40281	5	X	メ	X	X	X					21	
5-10-06 MW-TQ10'			*	1	1	1					22	
J MW-598'											23	
5-11-06 MW-6@10'											24	
MW-60 15'				П							25	
MW-6 @ 20'			T	П							26	
MW-7 @ 10'		T									27	
Mw-7 @ 15'	П	$\prod$			П						28	
V MW-7 @ 20/	$\prod$	П	П		П						29	
5-9-06 MW-8 0 8'	$\Pi$		П		1						30	
MW-8@ 12'	$\prod$		П								3/	
MW-8@16'	П		П							,	32	
MW-8 @ 20'	$\Pi$	П	П								33	
MW-8 @ 241	$\prod$	П									34	
1/	J.	1	A		A	W					35	
		7										
	T											
	$\top$	$\dashv$					$\dashv$	+				
RESERVED WITH: HNO <sub>3</sub> H <sub>2</sub> SO <sub>4</sub> NaOH ZnAce/NaOH	<u> </u>	НС	L		NaT	hio [	]	OTHE	R <b>√⁄</b> a	HSO.	H2(	)/Methanol
	RELIN				-+	<u> </u>					DATE/	TIME:
Tett Gaines 5-11-06 DATE/TIME: F	RELIN	QUIS	\ HED	A BY:		ar`					DATE/	15-06 TIME:
			-									
ECEIVED BY: (SAMPLES UNVERIFIED)  DATE/TIME:	RELIN	QUIS	HED	BY:							DATE/	TIME:
ECTIVED BY LAB: (VERIFIED) 5 DATE/TIME:	SAMPLES SHIPPED VIA: OPS FEDEX POST BUS							HER				
1/2/20 10 10/11/11/11/11/11/11/11/11/11/11/11/11/1	west L				~~~ <i>(</i>	7	. =		. 55	. 500	. 511	'\

# **Appendix C**



voice 530.243.7234 2218 Railroad Avenue fax 530.243.7494 Redding, California 96001

June 07, 2006

Lab ID: 6050852

Andy Malone **SOUNPACIFIC** 4612 GREENWOOD HEIGHTS DR KNEELAND, CA 95549

RE: NORTHCREST 76 SP-170

Dear Andy Malone,

Enclosed are the analysis results for Work Order number 6050852. All analysis were performed under strict adherence to our established Quality Assurance Plan. Any abnormalities are listed in the qualifier section of this report.

If you have any questions regarding these results, please feel free to contact us at any time. We appreciate the opportunity to service your environmental testing needs.

Sincerely,

Ricky D. Jensen Laboratory Director

California ELAP Certification Number 1677



Project:

www.basiclab.com

voice 530.243.7234

2218 Railroad Avenue Redding, California 96001 fax 530.243.7494

Report To: SOUNPACIFIC

4612 GREENWOOD HEIGHTS DR

Reported:

6050852 06/07/06

KNEELAND, CA 95549

Phone:

Lab No:

707-269-0884

Attention: Andy Malone

NORTHCREST 76 SP-170

P.O. #

## **Volatile Organic Compounds**

Analyte		Units	Results	Qualifier	MDL	RL	Method	Analyzed	Prepared	Batch
MW-1 Water	(6050852-01)	Sampled:05/	18/06 00:00	Received:05/24	1/06 11:01					
Gasoline		ug/l	ND			50.0	EPA 8015/8260	05/24/06	05/24/06	B6E0602
Benzene		11	0.6			0.5	н	"	"	
Toluene		U	ND			0.5	"	11		
Ethylbenzene		11	ND			0.5	11	17	"	
Xylenes (total)		.,	ND			1.0	11	"	11	"
Methyl tert-butyl	ether	11	7.4			1.0	"	H	"	
Di-isopropyl ether		11	ND			0.5	11	"	"	"
Tert-amyl methyl	ether	11	2.5			0.5	ш	11	"	"
Ethyl tert-butyl ether		II .	ND			0.5	n	"	"	"
Tert-butyl alcohol		II	ND			50.0	11	IT	"	"
Surrogate: 4-Bromot	fluorobenzene		90.0 %		43-1	55	"	"	"	<i>"</i>
MW-2 Water	(6050852-02)	Sampled:05/	18/06 00:00	Received:05/24	1/06 11:01					
Gasoline	· · · · · · · · · · · · · · · · · · ·	ug/l	ND			50.0	EPA 8015/8260	05/24/06	05/24/06	B6E0602
Benzene		Ü	ND			0.5	11	II .	ır	
Toluene		n	ND			0.5	11	"	п	11
Ethylbenzene		If	ND			0.5	11	III	"	11
Xylenes (total)		11	ND			1.0	II .	11	п	11
Methyl tert-butyl ethe	er	Ħ	ND			1.0	II .	II .	11	
Di-isopropyl ether	<b>.</b>	Ħ	ND			0.5	II.	!!	11	17
Tert-amyl methyl eth	ner	u	ND			0.5	ır	11	u u	O
Ethyl tert-butyl ether		II.	ND			0.5	II .	n	O.	D
Tert-butyl alcohol		11	ND			50.0	н	U	IT.	PT
Surrogate: 4-Bromof	fluorobenzene		92.2 %		43-1	55	"	"	"	"
MW-3 Water	(6050852-03)	Sampled:05/:		Received:05/24						
Gasoline	(000000 00)	ug/l	22200	R-07		1000	EPA 8015/8260	05/24/06	05/24/06	B6E0602
Benzene		" "	14.2	R-07		10.0	0	II	н	11
Toluene		u	1420	R-07		10.0	n	и	11	11
Ethylbenzene		ï	611	R-07		10.0	U	11	11	0
Xylenes (total)		n	2350	R-07		20.0	II.	*1	n n	
•	0.5		ND	R-07		20.0	II	0	tr .	n
Methyl tert-butyl ethe	ei	ıı	ND	R-07		10.0	п	0	19	н
Di-isopropyl ether		ıı .	ND	R-07		10.0	11	IT	ıı	н
Tert-amyl methyl eth		и	ND	R-07		10.0	u	IT	11	11
Ethyl tert-butyl ether		11	ND	R-07		1000	n n	11	n	**
Tert-butyl alcohol	<b>a</b>			K-07	43-1.		"	"	"	"
Surrogate: 4-Bromof	(6050852-04)	Sampled:05/:	99.2 %	Received:05/24		<i>55</i>				
	(0030832-04)		ND	Received 05/2	700 11.01	50.0	EPA 8015/8260	05/24/06	05/24/06	B6E0602
Gasoline		ug/l	ND			0.5		,,	, — ., II	"
Benzene		n .	ND ND			0.5	11	H	ır	ır
Toluene		11	ND ND			0.5	11	n	ш	н
Ethylbenzene		я	ND ND			1.0	**		ır	11
Xylenes (total)						1.0	n n	**	11	11
Methyl tert-butyl e	etner	 n	3.7			0.5	n n	н	11	**
Di-isopropyl ether		"	ND				11	11	11	H
Tert-amyl methyl eth		"	ND			0.5	n	11	11	n
Ethyl tert-butyl ether			ND			0.5			**	0
Tert-butyl alcohol		11	ND			50.0	"		,,	"
Surrogate: 4-Bromofi		C	91.4 %	Beering J.OF /O.	43-1.	55			<u> </u>	
	(6050852-05)	Sampled:05/1		Received:05/24	100 TI:01	50.0	EPA 8015/8260	05/24/06	05/24/06	B6E0602
Gasoline		ug/l "	88.1	G-03		0.5	LPA 0013/0200	03/2 <del>1</del> /00	03/27/00 "I	100002
Benzene		"	ND				11		a	
Toluene			ND			0.5				

Basic Laboratory, Inc. California D.O.H.S. Cert #1677



voice 530.243.7234 fax 530.243.7494

2218 Railroad Avenue Redding, California 96001

90.0 %

A-12- 18-3

Report To:

SOUNPACIFIC

4612 GREENWOOD HEIGHTS DR

KNEELAND, CA 95549

Attention:

NORTHCREST 76 SP-170 Project:

Andy Malone

Reported:

Lab No: 6050852 06/07/06

Phone: 707-269-0884

P.O. #

#### **Volatile Organic Compounds**

Methy   Water   (050852-05)	Analyte	Units	Results	Qualifier	MDL RL	Method	Analyzed	Prepared	Batch
ND	MW-5 Water (6050852-05)	Sampled:05/	18/06 00:00	Received:05/24	/06 11:01				
No	Ethylbenzene		ND		0.5	11		05/24/06	11
Methy tert-buty letter	•		ND			II .	"	If	17
Dispurpopy lether	,	II .	64.6			11	н	"	н
Tert-buty  ether   1.0		n n	ND		0.5	TI .	"	"	11
Ethy tert-butyl ether		п	4.2		0.5				11
Tert-buty  aichor   60.0   6	• •	u	ND		0.5	n		**	
Surrogate: 4-Bromofluorobenzene   96.4 %   43-155	, ,	U	60.0		50.0	If		ıt	
MW-6   Water   (6050852-06)   Sampled:05/18/06 00:00   Received:05/24/06 11:01   So.0   EPA 8015/8260   05/24/06   05/2			96.4 %		43-155	"		"	"
Benzene		Sampled:05/	18/06 00:00	Received:05/24	/06 11:01				
Benzene	Gasoline	ug/l	ND			EPA 8015/8260	05/24/06	05/24/06	
Toluene	Benzene	II .	ND			II .	"		
Ethylpenzene	Toluene	"	ND		0.5	II .			
Np	Ethylbenzene	II.	ND		0.5	"			
Methyl tert-butyl ether		It	ND		1.0	n n			II.
Di-isopropyl ether		11	1.4		1.0	"		=	11
Tert-amy methyl ether	•	π	ND		0.5	"		==	11
Tetry-butyl alcohol		11	ND		0.5	Ħ			11
Tert-butyl alcohol		11	ND		0.5	11			11
Surrogate: 4-Bromofluorobenzene         89.6 %         43-155         " " " " " " " " " " " " " " " " " " "	·	11	ND		50.0	n			
MW-7   Water   (6050852-07)   Sampled:05/18/06 00:00   Received:05/24/06 11:01   So.0   EPA 8015/8260   05/24/06   05/24/06   B6E0602   Benzene   "ND   ND   0.5   "" "" "" "" "" "" "" "" "" "" "" "" "			89.6 %		<i>43-155</i>	"	"	"	<i>"</i>
Gasoline   ug/l ND   50.0   EPA 8015/8260   05/24/06   05/24/06   B6E0602		Sampled:05/	18/06 00:00	Received:05/24	/06 11:01				
Benzene         "ND         0.5         """"""""""""""""""""""""""""""""""""	Gasoline	ug/l	ND		50.0	EPA 8015/8260	05/24/06	05/24/06	B6E0602
Toluene "ND 0.5 " " " " " " " " " " " " " " " " " " "		ű.	ND		0.5	IT	"	17	n
Ethylbenzene         "ND         0.5         """"""""""""""""""""""""""""""""""""		u	ND		0.5	II			"
Xylenes (total)		11			0.5	11	н	n n	11
Methyl tert-butyl ether         ND         1.0         " ND         " ND           Di-isopropyl ether         " ND         0.5         " " " " " " " " " " " " " " " " " " "		II			1.0	н	п	11	"
Di-isopropyl ether		II .			1.0	11	. 0	11	11
Tert-amyl methyl ether "ND 0.5 """""""""""""""""""""""""""""""""""		11			0.5	11	u u	U	u u
Ethyl tert-butyl ether "ND 50.5 """"""""""""""""""""""""""""""""""		11			0.5	п	tr .	11	U
Tert-butyl alcohol		n			0.5	u	"	11	"
Surrogate: 4-Bromofluorobenzene         90.0 %         43-155         " " " " " " " " " " " " " " " " " " "	• •	"			50.0	n	IT .	II	
MW-8         Water         (6050852-08)         Sampled:05/18/06 00:00         Received:05/24/06 11:01           Gasoline         ug/l         ND         50.0         EPA 8015/8260         05/24/06         05/24/06         B6E0602           Benzene         "ND         0.5         """"""""""""""""""""""""""""""""""""					43-155	"	"	"	"
Gasoline         ug/l         ND         50.0         EPA 8015/8260         05/24/06         05/24/06         B6E0602           Benzene         "ND         0.5         """"""""""""""""""""""""""""""""""""		Sampled:05/:	18/06 00:00	Received:05/24	/06 11:01				
Benzene         "ND         0.5           Toluene         ND         0.5           Ethylbenzene         ND         0.5           Xylenes (total)         ND         1.0           Methyl tert-butyl ether         ND         1.0           Di-isopropyl ether         ND         0.5           Tert-amyl methyl ether         ND         0.5           Ethyl tert-butyl ether         ND         0.5		ug/l	ND			EPA 8015/8260	05/24/06	05/24/06	
Toluene         ND         0.5           Ethylbenzene         ND         0.5           Xylenes (total)         ND         1.0           Methyl tert-butyl ether         ND         1.0           Di-isopropyl ether         ND         0.5           Tert-amyl methyl ether         ND         0.5           Ethyl tert-butyl ether         ND         0.5	Benzene	11	ND		0.5	11	"	ii	
Ethylbenzene       "ND       0.5       """"""""""""""""""""""""""""""""""""	Toluene	II .	ND		0.5		"	n	
Xylenes (total)       "ND       1.0       """"""""""""""""""""""""""""""""""""		п	ND		0.5		"	u u	
Methyl tert-butyl ether         "ND         1.0         """"""""""""""""""""""""""""""""""""	•	11	ND		1.0	17	11		"
Di-isopropyl ether         " ND         0.5         " "           Tert-amyl methyl ether         " ND         0.5         " "           Ethyl tert-butyl ether         " ND         0.5         " "		11			1.0	II .	l1	ır	11
Tert-amyl methyl ether " ND 0.5 " " " " " Ethyl tert-butyl ether " ND 0.5 " " " " " " " " " " " " " " " " " " "		u			0.5	"	It .	11	11
Ethyl tert-butyl ether "ND 0.5 """		ıı .			0.5	H	п	11	11
50.0 " " " "		11				н	п		IF
	· · · · · · · · · · · · · · · · · · ·	ır			50.0	II .	н	11	

43-155

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

Surrogate: 4-Bromofluorobenzene

Page 3 of 5



voice 530.243.7234 2218 Railroad Avenue fax **530.243.7494** 

Redding, California 96001

Report To:

SOUNPACIFIC

4612 GREENWOOD HEIGHTS DR

Lab No: Reported:

6050852 06/07/06

KNEELAND, CA 95549

Phone:

707-269-0884

P.O. #

Attention: Andy Malone Project: NORTHCREST 76 SP-170

TPH Diesel & Motor Oil

Analy	te		Units	Results	Qualifier	MDL	RL	Method	Analyzed	Prepared	Batch
	Water	(6050852-01)	Sampled:05/	18/06 00:00	Received:05/2	4/06 11:01					
Diesel		(	ug/i	ND			56	EPA 8015 MOD	06/02/06	05/24/06	B6E0578
Motor O	il			ND			56	II .	n n	н	"
	" te: Octacos	ane		112 %		50-150	,	"	"	"	"
	Water	(6050852-02)	Sampled:05/	18/06 00:00	Received:05/2	4/06 11:01					
Diesel			ug/l	ND			56	EPA 8015 MOD	06/02/06	05/24/06	B6E0578
Motor O	il		"	ND			56	II .	II .	п	71
	te: Octacos	ane		110 %		50-150		"	"	n .	"
MW-3	Water	(6050852-03)	Sampled:05/	18/06 00:00	Received:05/2	4/06 11:01					
Diesel			ug/l	3530			56	EPA 8015 MOD	06/02/06	05/24/06	B6E0578
Motor Oi	il		н	ND			56	0	"	"	**
Surrogat	te: Octacos	ane		103 %		50-150	1	"	"		
MW-4	Water	(6050852-04)	Sampled:05/	18/06 00:00	Received:05/2	4/06 11:01					<u></u>
Diesel			ug/l	ND			56	EPA 8015 MOD	06/02/06	05/24/06	B6E0578
Motor Oi	il		īr	ND		•	56	n	11	II.	"
Surrogat	te: Octacos	ane		89.9 %		50-150		"	"		"
MW-5	Water	(6050852-05)	Sampled:05/:	18/06 00:00	Received:05/2	4/06 11:01					
Diesel			ug/i	ND			56	EPA 8015 MOD	06/03/06	05/24/06	B6E0578
Motor Oi	1		H	ND			56	11	11	"	"
Surrogat	te: Octacos	ane		107 %		50-150		"		"	
MW-6	Water	(6050852-06)	Sampled:05/:	18/06 00:00	Received:05/2	4/06 11:01					
Diesel			ug/l	ND			56	EPA 8015 MOD	06/03/06	05/24/06	B6E0578
Motor Oi	ł		,,	ND			56	II	"	14	**
Surrogat	te: Octacos	ane		100 %		50-150				n	"
MW-7	Water	(6050852-07)	Sampled:05/:	18/06 00:00	Received:05/2	4/06 11:01					
Diesel			ug/l	ND			56	EPA 8015 MOD	06/03/06	05/24/06	B6E0578
Motor Oi	I		n	ND			56	11	11	"	11
Surrogat	e: Octacos	ane		94.6 %		50-150					
MW-8	Water	(6050852-08)	Sampled:05/	L8/06 00:00	Received:05/2	4/06 11:01					
Diesel			ug/l	ND		-	56	EPA 8015 MOD	06/03/06	05/24/06	B6E0578
Motor Oi	l		**	ND			56	"		"	"
Surrogat	e: Octacosa	ane		<i>88.7</i> %		<i>50-150</i>		"	"	"	"



voice 530.243.7234

fax 530.243.7494

2218 Railroad Avenue Redding, California 96001

Report To: SOUNPACIFIC

4612 GREENWOOD HEIGHTS DR

KNEELAND, CA 95549

Attention:

Andy Malone

Project:

NORTHCREST 76 SP-170

Lab No:

6050852

Reported:

06/07/06 707**-**269-0884

Phone:

P.O. #

#### **Notes and Definitions**

R-07 The sample was diluted due to the presence of high levels of target analytes resulting in elevated reporting limits.

Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag). The J flag is equivalent to the DNQ Estimated Concentration flag.

G-03 The GRO result reported for this sample does not match the laboratory's gasoline standard, but is due primarily to MTBE.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the detection limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference
< Less than reporting limit

Less than or equal to reporting limit

> Greater than reporting limit

≥ Greater than or equal to reporting limit

MDL Method Detection Limit

RL/ML Minimum Level of Quantitation

MCL/AL Maxium Contaminant Level/Action Level mg/kg Results reported as wet weight

TTLC Total Threshold Limit Concentration
STLC Soluble Threshold Limit Concentration

TCLP Toxicity Characteristic Leachate Procedure

Prity January Approved By

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

Page 5 of 5

			BA	SIC LABOR	ATORY CHAIN OF	CUS	TOE	Y F	REC	ORE	)				LAB :	#:			
	2	218			ling, CA 96001 (530							94			6050852 SAMPLE TYPE:				
CLIENT NAM	E:					PR	OJEC1	NAN	Æ:	<u> </u>		PI	ROJECT#:		SAMI	PLE TY	PE:	`	_
	Sal	احرر	2			A!	-A T	71.	a 64	·	7/		<p-1< td=""><td>70</td><td>1</td><td>سد در</td><td><b>T</b> O</td><td></td><td></td></p-1<>	70	1	سد در	<b>T</b> O		
ADDRESS:		-0	170	IFIC	<u></u>	RE	QUES	red (	OMF	P. DA	TE:	S <sup>1</sup>	TATE FORM	/S?	# OF SAMPLES:				
	P/	^	R.	v 13	CA 9554		572	۸.	ا مید	۸ (		06				8			
	۲.۰	ر ر			11 2001				7714	<u> </u>	) <u> </u>	<u> </u>	BUOLE		+				_
		Kr	<b>JE</b>	LAND,	Um 9537	7	KIN AK	OUNI	אוו כ	E: 8	יום מוי		RUSH [		PA	GE	OF_	1	_
						_	L		Α	NALY	SIS R	EQUES	TED		↓	I			
PROJECT MA	ANAGER: - <b>A</b>			M		1				_					İ	REP:			
DUONE.	<u> </u>	12 O	y IFAV.	1 plone	E-MAIL: andy Q 19 Soun pacrfic, PO#:	#	90928			2					1	ID#:			
PHONE:	769 -A	044	FAX:	מא. מורנת	E-MAIL: anay &	0	27	_		8015					1	ID#:			
INVOICE TO:	201-0	50		1)201-45	PO#:	Cary	-		7	4						SYSTE	M#:		-
	Sour	PA	CIFI	4		В	(EPA			EPA				1		ĺ			
SPECIAL MAI					EDT 🔀	О Т			M							GLOB/	AL ID#		
		Tw				<b>⊣</b> ⊤	_		)~	TIHY /	2					T060	) 15 oc	200	6
ĺ		A		S WELL	Installation Wh Event	L E S	<del>'</del> ₹	ľΩ̈́	ő	He	H,					QC =	:1 2	3 4	1
		TE	М	SAMPL	ing Eugnt	s	1	K7	7	11	17				LAB	<u> </u>		<u>.</u>	_
DATE	TIME	R	P	SAM	PLE DESCRIPTION		<u> </u>				•				ID	R	EMAR	KS	
5-18-02		X		M	N-1	5	X	X	X	X	×								
1		Ti			N-2	1		Ť		1			11	1	2				
		+				$\dashv \dagger$		+	+		++						<del>-</del> \$		
		₩		<b>M</b> ,	N-3	-		+		+	+			-	3			<b>.</b>	_
		$\bot\!\!\!\!\bot$		M	W-4	$\perp \perp$	Ш	$\perp$	$\perp$	44	$\bot \bot$				4		<u>し</u>		>
				Mv	V-5										2		<u>ت</u> مــ		بو
				4 -	V-6										6	Ş	Ţ.		3
		11		1	v-1			$\top$			$\top \!$				7	Coolexs	~	٠	_
- 1/ -		1	$\vdash$	l l	,		V	V	<b>V</b>	V	V			-	8	्रह		<u> </u>	_
- 4		V		1 10	N-8	<b>Y</b>	V	<b>V</b>	' <b>V</b>	<b>W</b>	<b>V</b>			+	0	<u>_</u>	<del>-3</del> -	4	_
		$\bot$					<b>  </b>								$\sqcup$	->		$\sim$	
																8	3	<u>ئە</u> _	,
								Ì	ĺ					İ			کّر	3	
																$\overline{\lambda}$	3	र्ड्	
									1	$\neg \uparrow$			1 1	1					_
		+	+			_		}					+	<del>  </del>	<del>                                     </del>	-2	<del>-6)</del> -	<del>&gt;</del>	٦
							$\vdash$		_	_	-			-		<u> </u>	<u> 3</u>	amthe	4
		$\sqcup$	_	<u> </u>								$\perp$			<b> </b>	<del></del>		<u> </u>	4
																بغ	3		
															ιТ	3	5	حر	
1						1							1			<del>- 177</del>		1.4	٦
		+	+			+	$\vdash$	$\dashv$	-	$\dashv$	+	$\dashv$	<del>                                     </del>	1-1	<del>-  </del>				$\dashv$
		$\vdash$	-	<u> </u>		+	$\vdash \vdash$			$\dashv$	+	-	1 -	+ -	$\rightarrow$				$\dashv$
			_L	<u></u>					45				$\bot\bot\bot$						╛
PRESERVED V		IO <sub>3</sub> [		H₂SO₄	aOH ZnAce/NaO			L		NaTi	nio 🗀	07	THER						
SAMPLED BY:	/1				DATE/TIME:		NQUIS			_					/DATE		-7		
RECEIVED BY	<u>-Ske</u>	كلمه	W		5-18-06	BEI I	NQUIS	<u>QVA</u>	RV.		a.				DATE/	<u>ンン</u> -	06		4
COLIVED DI	•				J. 1. S. 1. 11VIE.	'```	. 10010		<b>_</b> .						J. (1 L/				
RECEIVED BY	: (SAMPLE	S UN	VERIF	IED)	DATE/TIME:	RELI	NQUIS	HED	BY:						DATE/	TIME:			1
											╛								
RECEIVED BY LAB: (VERIFIED)  DATE/TIME: SAI						SAMPLES SHIPPED VIA: UPS FEDEX POST BUS OTHER													
<del></del>	\	: 7)			15-11-01 1114	1.1					7								- 1

# **Appendix D**



# **Standard Operating Procedures**

# **Groundwater Level Measurements and Free Phase Hydrocarbon Measurements**

All SounPacific staff and contractors shall adopt the following procedures any time that groundwater elevations are determined for the purposes of establishing groundwater gradient and direction, and prior to any sampling event.

Wells are to be tested for free phase hydrocarbons (free product) before the first development or sampling of any new well, and in any well that has historically contained free product.

## **Equipment Checklist**

Ш	Combination water level / free phase hydrocarbon indicator probe (probe)
	Gauging Data / Purge Calculations Sheet
	Pencil or Pen/sharpie
	Disposable Gloves
	Distilled Water and or know water source on site that is clean
	Alconox (powder) or Liquinox (liquid) non-phosphate cleaners—do not use soap!
	Buckets or Tubs for decontamination station
	Tools necessary to access wells
	Site Safety Plan
	This Standard Operating Procedure
	Notify Job site business that you will be arriving to conduct work.

#### **Procedure**

- 1. Review Site Safety Plan and utilize personal protection appropriate for the contaminants that may be encountered.
- 2. Access and open all monitoring wells to be measured. Allow wells to equilibrate for approximately 15 minutes before taking any measurements.

# Standard Operating Procedure for Groundwater Level and Free Product Measurements Page 2 of 2

- 3. Decontaminate probe with Alconox or Liquinox solution, and rinse with distilled water.
- 4. Determine the diameter of the well to be measured and indicate this on the Gauging Data / Purge Calculations Sheet.
- 5. <u>Words of caution:</u> Please be careful with water level and product meters probes are not attached with high strength material so please make sure to avoid catching the end on anything in the well and make sure not to wind reel to the point that it could pull on the probe. *If product is suspect in a well, go to step 6, if no product is suspected go to step 7 below.*
- 6. When product is present or suspected: use the product level meter. Clip the static charge clamp to the side of the well casing. Then lower probe into the well through the product/water interface about one foot if possible. Then slowly raise the probe back up through the product/water interface layer and record the level as the tone changes from solid to broken-record this level in the Gauging Data / Purge Calculations Sheet to the nearest 0.01 foot (DTP). Continue to raise the probe up through the product until the tone stops completely-record this level on the Gauging Data / Purge Calculations Sheet to the nearest 0.01 foot (DTW). Then go to step 8.
- 7. When <u>no</u> product is present or suspected: If no free product is present, record the depth of the water (to the nearest 0.01 foot) relative to the painted black mark on the top of the well casing. Leave the probe in the well just a hair above the water level to ensure the well as equilibrated. As the well rises, the tone will sound. Make sure no increase in water levels have occurred in over a ten-minute period. Water levels can lower as well as rise. Make sure you note when the level you keep lowering the probe to has remained stable for at least ten minutes. Once this has been accomplished, please record this level in the Gauging Data / Purge Calculations Sheet to the nearest 0.01 foot (DTW).
- 8. Turn off the probe, and use the probe to determine the depth to the bottom of the well relative to the top of the well casing. This is the depth to bottom measurement (DTB).
- 9. Decontaminate probe and tape by washing in an Alconox/Liquinox solution (*read directions on solution for ratio of water to cleanser*) and use the toothbrush provided to remove any foreign substance from the probe and tape. Then triple rinse probe and tape with clean water and then proceed to take measurements in the next well.
- 10. If sampling is to occur, proceed to implement SounPacific's Standard Operating Procedure for Monitoring Well Purging and Sampling. If no sampling is to be performed, close and secure all wells and caps.



# **Standard Operating Procedures**

## **Monitoring Well Purging and Groundwater Sampling**

All SounPacific employees and contractors shall adopt the following procedures any time that groundwater samples are to be taken from an existing groundwater monitoring well.

Prior to the implementation of these procedures, the groundwater level **MUST** be measured and the presence of free phase hydrocarbons determined in accordance with SounPacific's Standard Operating Procedures for Groundwater Level Measurements and Free Phase Hydrocarbon Measurements.

## **Equipment Checklist**

Gauging Data / Purge Calculations Sheet used for water level determination
Chain of Custody Form
pH/ Conductivity / Temperature meter
Pencil or Pen
Indelible Marker
Calculator
Disposable Gloves
Distilled Water
Alconox/liquinox liquid or powdered non-phosphate cleaner
Buckets or Tubs for decontamination station
Bottom-filling bailer or pumping device for purging
Disposable bottom-filling bailer and emptying device for sampling
String, twine or fishing line for bailers
Sample containers appropriate for intended analytical method (check with lab)
Sample labels
Site Safety Plan
Tools necessary to access wells
Drum space on site adequate for sampling event

# SounPacific Standard Operating Procedures for Groundwater Level Measurements and Free Phase Hydrocarbon Measurements, Page 2 of 3

#### **Procedure**

- 1. Review Site Safety Plan and utilize personal protection appropriate for the contaminants that may be encountered.
- 2. Measure groundwater levels and check for the presence of free product in accordance with the Standard Operating Procedures for Groundwater Level Measurements and Free Phase Hydrocarbon Measurements.

## **Purging**

- 3. Calculate and record the volume of standing water in each well using the information provided on the Gauging Data / Purge Calculations sheet.

  (DTB-DTW) x Conversion Factor = Casing Volume.
- 4. The purge volume shall be at least three times and no more than seven times the volume of standing water (the casing volume).
- 5. Purge the well by bailing or pumping water from the well into a calibrated receptacle, such as a five gallon bucket or tub with markings to indicate one gallon increments. Collect purgeate in a 55 gallon labeled drum and store on site. Drum labels should include the date, contents, site number, and SounPacific's name and telephone number.
- 6. Take measurements of pH, conductivity, temperature, and visual observations to verify the stabilization of these parameters. At least five measurements of these parameters should be made throughout the purging process. The parameters shall be considered stabilized if successive measurements vary by less than 0.25 pH units, 10% of conductivity in μS, and 1°C (or 1.8°F). Continue purging until at least three times the casing volume has been removed, and the measured parameters have stabilized as indicated above. Do not exceed seven casing volumes.
- 7. Take a final depth to groundwater measurement and calculate the casing volume of the recharged well. Ideally, the casing volume should have recharged to at least 80% of the original measured casing volume before sampling commences. If due to slow recharge rates it is not feasible to wait for the well to fully recharge, then note this on the Gauging Data / Purge Calculation Sheet and proceed to sample following the procedure below.

# SounPacific Standard Operating Procedures for Groundwater Level Measurements and Free Phase Hydrocarbon Measurements, Page 3 of 3

## **Sampling**

- 8. After completing groundwater measurement, and checking for free product if necessary, in accordance with SounPacific's Standard Operating Procedures for Groundwater Level Measurements and Free Phase Hydrocarbon Measurements, and after purging monitoring wells as described above, groundwater samples may be collected.
- 9. Slowly lower a clean, previously unused disposable bailer into the well water approximately half of the bailer length, and allow the bailer to slowly fill.
- 10. Withdraw the full bailer from the monitoring well and utilize the included (clean and unused) bottom-emptying device to fill the necessary sample containers, and seal the container with the included PTFE (Teflon) lined cap.
- 11. When filling VOAs, fill the VOA completely full, with the meniscus rising above the rim of the bottle. Carefully cap the VOA and invert it and gently tap it to determine whether air bubbles are trapped inside. If the VOA contains air bubbles, refill the VOA and repeat this step.
- 12. All samples shall be labeled with the Sample ID, the Sample Date, and the Sample Location or Project Number. Use an indelible marker for writing on sample labels.
- 13. Record all pertinent sample data on the Chain of Custody.
- 14. Place samples in an ice chest cooled to 4°C with ice or "blue ice". Bottles should be wrapped in bubble wrap, and VOA's should be inserted in a foam VOA holder to protect against breakage. Samples are to be kept at 4°C until delivered to the laboratory. Any transference of sample custody shall be indicated on the Chain of Custody with the appropriate signatures as necessary.
- 15. Utilize clean, previously unused gloves, bailer and line, and bottom-emptying device for each well sampled.
- 16. When finished with all sampling, close and secure all monitoring wells.
- 17. Leave the site cleaner than when you arrived and drive safely.

# Appendix E

#### GAUGING DATA/PURGE CALCULATIONS



WELL NO.	DIA. (in.)	DTB (ft.)	DTW (ft.)	ST (ft.)	CV (gal.)	PV (gal.)	SPL (ft.)	Bailer Loads	Notes
MW-1	Z	27.64	12.31						
MW-2	Z	Z6.27	11.91						
mw-3	Z	26.04	12.28	1					
Mw-4	2	25.88	12.18						SHRAN
MW-5	Z	26.28							SARBA
mw-6	2	26.78	12.65						Suran
mw-7	Z		11.97						No SHEEN
MW-8	2	20.42	12.37						No SHERN SHERN

(F) 23.30 Explanation: DIA. = Well Diameter

DTB = Depth to Bottom DTW = Depth to Water

ST = Saturated Thickness (DTB-DTW)

CV = Casing Volume (ST x cf)

PV = Purge Volume (standard 3 x CV, well development 10 x CV) SPL = Thickness of Separate Phase Liquid

Conversion Factors (cf):

2 in. dia. well of = 0.16 gal./ft. 4 in. dia. well of = 0.65 gal./ft. 6 in. dia. well of = 1.44 gal./ft.

TACK SEIGHAN



Sheet 1 of 8												
Date:	5/1	5/06	Project Name:	Northcas	25T 76	Project No: 5P-176	Well Number: Mw ~ (					
Analyses Tested:		WA	WRLL	ORUBIO	PMENT							
Sample Containers:	N	HA TA		timense and								
Purge Technique:			Bailer		X	Pump						
Sounder Used:			Water Meter		×	Interface Meter						
Water & Free Product Levels												
Time Depth to Water Depth to Product Notes:												
1900	12:58	12.3	31									
77. 222.038												
				Field Meas	arements	l						
Time	Total Vol. Removed/(gal)	pН	Temp/(F)	Cond./(ms/cm)	DO/(mg/L)	DO/(%)						
12:59	0	6.61	57.48	1.318	1.03	10.1						
3:38	554	6.71	57.51	0.707	4.60	45.0						
						3						
					-	N 20 N						
				Field Scientist:	JACK	SKRAHAN						



						DIRE	- 01 0					
Date: 5/15/06 Project Name: NORTHCREST 76 Project No: 5P-170 Well Number: MN - Z  Analyses Tested: WRIL DRURLORMENT												
Analyses Tested:	s :	u	IXIL DI	RURLOAM	RNT	•						
Sample Containers:	:	_										
Purge Technique			Bailer		×	Pump						
Sounder Used:			Water Meter		(A)	Interface Meter						
Water & Free Product Levels												
Time Depth to Water Depth to Product Notes:												
1:00 11,91												
				Field Meas	urements							
Time	Total Vol. Removed/(gal)	pН	Temp/(F)	Cond./(ms/cm)	DO/(mg/L)	DO/(%)						
1:01	0	6.46	56.33	0.744	1,74	16.7						
3:56	55	6.10	56.24	0.486	3,07	29.5						
						2						
					_							
				Field Scientist:	JACK	e SKRANAN						



			Well G	auging/Sa	impling F	Report Shee	et 3 of 8				
Date:	5/10	5/06	Project Name:	Norther	IST 76	Project No: <u>\$8-176</u>	© Well Number: Mw −3				
Analyses Tested:		U	NRLL 1	DRVRLOP.	MENT						
Sample Containers:											
Purge Technique:			Bailer		Ø	Pump					
Sounder Used:			Water Meter		X	Interface Meter					
Water & Free Product Levels											
Time Depth to Water Depth to Product Notes:											
1:	0.3	12,2	8		and the second second second		4.3.1.0.4.1.				
				Field Meas	urements						
Time	Total Vol. Removed/(gal)	pH	Temp/(F)	Cond./(ms/cm)	DO/(mg/L)	DO/(%)					
1:04		6,31	67.34	1.139	0.82	8.0					
	550	5.8Z	57,48		2.80	27.3					
							<u> </u>				
						2					
					T. 4	Suran. 1					
				Field Scientist:	SACK	- SKEAHAN					



Date: 5/15/06 Project Name: NONTHENTST 76 Project No: SP-170 Well Number: MW-4  Analyses Tested: WKW DEVELOPMENT									
Tested: Sample			VKU A	U5 V3L6PI	UZN T				
Containers: Purge Technique:	,		Bailer		垃	Pump			
Sounder Used: Water Meter Meter Meter									
		1.7/23 = 1.7/2 - 1		Water & Free P	roduct Levels				
Т	ime	Depth to	Water	Depth to	Product		Notes:		
12	:56	12,18	3						
				Field Meas	urements				
Time	Total Vol. Removed/(gal)	pН	Temp/(F)	Cond./(ms/cm)	DO/(mg/L)	DO/(%)			
12:57		6.71	57.12		0.63	6.1			
3:08	55	6.53	57.39	0,329	4.37	42.6			
				Field Scientist:	TAN	K SKRAHAN	j		
				Streethor	-,10		economical and have an extensi		



Sheet 5 of 8 5/15/06 Project Name: Northeast 76 Project No: 58-170 Well Number: MW-5 WILL DEVELOPMENT Analyses Sample Purge Pump Bailer Technique: Interface Sounder Water Meter Water & Free Product Levels Notes: Depth to Water Depth to Product 1:06 13,21 Field Measurements Total Vol. DO/(%) Temp/(F) Cond./(ms/cm) DO/(mg/L) Removed/(gal) 6.65 1,00 7.8 57.66 1.179 1:07 6.66 0.753 55 25.1 57.87 2.56 4:19 Field Scientist: Jack Skiravar



Sheet 6 of 8

Date	5/1	5/06	Project Name:	NORTHER	RST 76	Project No: 5P-/7	Well Number: MW − 6	
Analyses Tested:			WRLL	DEVELO	proser?			
Sample Containers:	,							
Purge Technique			Bailer		X	Pump		
Sounder Used: Water Meter Interface Meter								
				Water & Free F	roduct Levels			
1	'ime	Depth to	Water	Depth to	Product		Notes:	
12	:52	12.6	5					
				Field Meas	urements			
Time	Total Vol. Removed/(gal)	pН	Temp/(F)	Cond./(ms/cm)	DO/(mg/L)	DO/(%)		
12:53	0	6.26	58.66	0.441	3.62	35.8		
3:12	55	6.24	58.73	0.359	4.51	44.7		
				Field Scientist:	Jack	K SKEAHAN		



Sheet 7 of 8 5/15/06 Project Name: Nonth CREST 76 Project No: 5P-170 Well Number: MW-7 WRIL DEURLOPMENT Analyses Sample Purge N Pump Bailer Technique: Interface Meter Water Meter Used: Water & Free Product Levels Notes: Depth to Water Depth to Product 12:49 11.97 Field Measurements Total Vol. DO/(%) Cond./(ms/cm) DO/(mg/L) Temp/(F) pН Removed/(gal) 54.8 6.07 0.254 5.63 12:50 57.34 55 5.86 0.277 5.94 57.9 57.51 Z:// Field Scientist: JACK SKRARAN



Sheet 8 of 8 5/15/06 Project Name: Northteast 76 Project No: 59-170 Well Number: MW-8 WRIL PRURISPINENT Analyses Tested Sample Purge Pump Bailer Technique: Interface Meter Water Meter Used: Water & Free Product Levels Notes: Depth to Product Depth to Water SLOW RICHARGE 12,37 1:09 Field Measurements Total Vol. Cond./(ms/cm) DO/(%) Temp/(F) DO/(mg/L) Time pH Removed/(gal) 1:10 6.94 0.890 0.74 57.35 7.Z 30 6.41 0.527 6.04 4:33 59.64 60.4 Field Scientist: Jack SKRAWAN



#### GAUGING DATA/PURGE CALCULATIONS

Job Sites North CVEST 76 Job No.:

Job No.: \$2170

Seun Pacific
Environmental Services
(707) 269-0884

Event: Well Installation Sampling

Date: 5-18-06

WELL NO.	DIA. (in.)	DTB <b>5/18</b> DTW (ft.) (ft.)	ST (ft.)	CV (gal.)	PV (gal.)	SPL (ft.)	PTBS	PID	Notes	
MW-1	2	28-80 12-82	15.98	2.56	7.68		27.64	12.8	No SHARD SUGAR HE ODER	6
14W-2	2	27.92 12,23	15.65	2.51	7.53		26.27	10.5	SHIRD, NO HE OROR	4
14W-3	2	28.09 12.93	15.16	2.43	1.29		26.04	254.1	No SHAM, HC ODOR	8
MW-4	2	27.80 12.61	15.19	2.43	7.29		25.88	9.2	SHARN, SUGAT HC ODOR	)
MW-5	2	27.98 13.51		2.32	6.96		26.28	35.3	SHERN, BR SUGAT HE-DUR	7
MW-6	2	28.11 12.9	15.13	2.43	27.29		26.78	9.6	SHRAN, NO HE ODOR	2
MW-7	2	28.08 12.33	15.75	2.52	7.56		25.74	12,2	SHARN, No He mon	5
MW-8	2	23.23 12.6	10.56	1.69	5.07		20,42	-9.7	SHARN, No ACORON	3

#### Explanation:

DIA. = Well Diameter DTB = Depth to Bottom

DTW = Depth to Water

ST = Saturated Thickness (DTB-DTW)

CV = Casing Volume (ST x cf)

PV = Purge Volume (standard 3 x CV, well development 10 x CV)

SPL = Thickness of Separate Phase Liquid

Conversion Factors (cf):

2 in. dia. well of = 0.16 gal./ft.

4 in. dia. well of = 0.65 gal./ft.

6 in. dia. well of = 1.44 gal./ft.

Sampler:

Track SKEAKAN



							Silect OI X		
Date	5-18-	- 06	Project Name:	Vorther	est 76	Project No: SP-1	70 Well Number: MW-1		
Analyses Tested:		9, BT	XE,	5-Oxys	, TP	4d, TP+	lmo		
Sample Containers:	-	yll V	DAS,	Z	I-L B	rottles			
Purge Technique: Bailer									
Sounder Used:			Water Meter		×	Interface Meter			
			W	Water & Free I	Product Levels				
Т	Time	Depth to	Water	Depth to	Product		Notes:		
[1]:	02 am	12.8	1			No	Sheen Sugar HC		
11:	35	12.8	2				1		
		End							
				Field Meas	surements				
Time	Total Vol. Removed/(gal)	pH	Temp/(F)	Cond./(ms/cm)	DO/(mg/L)	DO/(%)			
12:57	0	6.90	57.34	1.178	0.61	8.0			
1:03	2.56	7.15	57.32	1.172	0.49	4.8			
1:09	5,12	7.15	57.33	1.170	0.38	3.8			
1:15	7.68	7.14	57.32	1.170	0.32	3.1			
	<u> </u>								
7									
				Field Scientist:	JACK	SKRANA	~		
		-							



Sheet Z of 8 Date: 5-18-06 Project Name: North CVEST 76 Project No: SP-170 Well Number: MWZ TPH9, BIXE, 5-DKYS, TPHd, TPHMO 3 HCl VOAs, 2 1-L Bottles Purge X Bailer Pump Technique: Interface Sounder Water Meter Water & Free Product Levels Depth to Water Depth to Product 11:07 Sheen No He mark 12.22 12.23 11:37 End Field Measurements Total Vol. DO/(%) Temp/(F) Cond./(ms/cm) DO/(mg/L) Removed/(gal) 6.61 56.17 15.Z 1.59 1:20 0 0.488 6.34 56.26 0.457 1.68 16.1 1:27 2.51 5,0Z 56.38 0.448 1:34 17.4 6.23 1.81 1:41 56.42 0.435 6.19 18,3 1.90 7.53 Field Scientist: JACK SKEAHAN



Sheet 3 of 8 Date: 5-18-06 Project Name: North ofest 76 Project No: SP-170 Well Number: MW-3 Analyses TPHq, BTXE, S-OXYS, TPHd, TPHMD 3 Hul VOAs, 2 1-L Bottles Purge Pump M Bailer Technique: Interface Sounder Water Meter Used: Water & Free Product Levels Depth to Water Notes: Time Depth to Product 11:11 12.91 No Sheen, HC open 12.93 11:40 12.93 . 1 11:51 End Field Measurements Total Vol. DO/(mg/L) DO/(%) Cond./(ms/cm) Temp/(F) pH Removed/(gal) 6.1 57.09 1.174 0.63 1:47 6.49 2.43 (.170 0,42 4.1 1:55 57.14 1.168 4.1 4.86 0.42 57.16 2:04 0.38 2:10 7.29 57.16 1.168 3.7

Field Scientist: TACK SKISAKAN



Well Gauging/Sampling Report  Sheet 4 of \$\\ \psi\ \\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \												
Date: 5-18-06 Project Name: North Crest 76 Project No: 5P-170 Well Number: MW-4												
Analyses Tested:	Analyses TPHg, BTXE, 5-0xys, TPHd, TPHmo											
Sample 3 HU VOAS , ZI-L BOTTLES												
Purge Technique:		E	Bailer		Pump							
Sounder Used:			Water Meter		process of the same of the sam	Interface Meter						
				Water & Free P	roduct Levels							
Т	Time Depth to Water Depth to Product Notes:											
11:	22	12.6	/			SHEAR,	SLIGHT HE OOSE					
11:	42	12.6				v V						
		End.										
				Field Meas	rements							
Time	Total Vol. Removed/(gal)	pН	Temp/(F)	Cond./(ms/cm)	DO/(mg/L)	DO/(%)						
12:02	0	6,24	56,87	0.231	1.42	13.7						
12:12	2.43	6.54	57.13	0.266	0.57	5,5						
12:20	4.86	6.77	57.07		0.49	4.7						
12:27	7,29	6.90	57.17	0.268	0.41							
						2 2						
				Field Scientist:	JAC	K SKITAHA	J					



Sheet 5 of 8 Date: 5-18-06 Project Name: North CVEST 76 Project No: 5P-17D Well Number: MW-5 PHg, BIXE, 5-Oxys, TPHd, TPHMO 3 HU VOAS, 2 1-L Bottles Sample Purge Y Bailer Pump Technique: Interface Sounder Meter Water Meter Water & Free Product Levels Depth to Water Depth to Product Notes: SHIRN, BELLOOK 13,51 11:15 SEIGHT HCODOR 13,51 11:44 End. Field Measurements Total Vol. DO/(%) Temp/(F) Cond./(ms/cm) DO/(mg/L) Removed/(gal) 6.88 1,163 0,43 57.42 4.2 2:14 2:20 2.32 1.160 57,55 0,41 4.0 3.5 0.36 2:26 4.64 57.61 1.160 0.35 2:32 6.96 3.4 57.53 1.157 Field Scientist: Jack SICKANAN



Sheet 6 of 8 Date: 5-18-06 Project Name: Novelnevest 76 Project No: 5P-170 Well Number: MW-6 TPH9, BTXE, 5-Oxys, TPHd, TPHmo Sample Containers: 3 HILL VOAS, Z IL Bottles Purge Bailer Pump Technique: Interface Sounder Water Meter Used: Water & Free Product Levels Notes: Time Depth to Water Depth to Product SHEEN, NO HE ODER 11:19 12.92 11:46 12.98 " 12.98 11 11:54 Field Measurements Total Vol. DO/(%) Cond./(ms/cm) DO/(mg/L) Temp/(F) Time pН Removed/(gal) 6.59 0.307 3.05 121,31 58.56 30.1 12:38 2.43 6,55 58.64 0.311 30.0 3.04 12:45 4,86 3.05 6.57 58.60 0.306 30.1 12:51 7,29 3.06 58,58 0.299 30.2 6.55 Field Scientist: Jack SunAHAN



Sheet 7 of 8 Date: 5-18-06 Project Name: North CVEST 76 Project No: SP-170 Well Number: MW-7 Analyses TPHg, BTXE, 5-OXYS, TPHd, TPHMO Sample Containers: 3 HU VOAS, Z IL BOTTLES Purge Bailer Pump Technique: Interface Sounder Water Meter Water & Free Product Levels Depth to Water Depth to Product Notes: 12.34 11:29 SHEBY NO HE OPER 11:47 17.33 11 End Field Measurements Total Vol. DO/(%) Temp/(F) Cond./(ms/cm) DO/(mg/L) Removed/(gal) 57.15 6,80 3:07 0.159 4.28 41.5 3:14 2.52 4.55 6.51 57.28 0.182 44.2 3:21 5.04 6.23 0,176 57.15 4.39 42.6 57,08 42.0 3:29 7.56 6,15 0,175 4.33 Field Scientist: JACK . SKRASHAN



Sheet 8 of 8

Date: 5-18-06 Project Name: Novtucvest 76 Project No: 5P-17D Well Number: (MW-8)											
Analyses TRHg, BTXE, 5-0xys, TPHJ, TPHMO											
Sample 3 HU VOAS, 2 1-L BOTTLES											
Purge Technique: Bailer Pump											
Sounder Used: Water Meter Interface Meter											
				Water & Free P	roduct Levels						
1	Time Depth to Water Depth to Product Notes:										
//:	26	12.6	7			SHERN	No HC ODOR				
11:	49	12.6	7			- 4					
	'	End									
				Field Meas	urements		_				
Time	Total Vol. Removed/(gal)	pН	Temp/(F)	Cond./(ms/cm)	DO/(mg/L)	DO/(%)					
2:37		7,22	56.96	0.317	1.86	18.0					
2:45		7.12	57.15	1,282	2.17	21.1					
	3,38	7.12	57.25		6.22	60.4					
3:05	5.07	7.12	57,29	0,267	6,27	61.0					
						A					
				Field Scientist:	JACK	K. SKRANA	$\sim$				
					- 10						
200000000000000000000000000000000000000											